Katie's glass holds a quarter of a litre when it is full.
She nearly fills it to the top with juice.
Tick the approximate amount of juice she puts in the glass.

4 millilitres   20 millilitres   120 millilitres
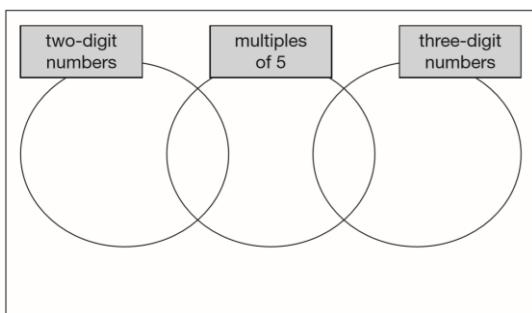
220 millilitres   420 millilitres

$\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{10}$ $\frac{1}{20}$ $\frac{1}{40}$

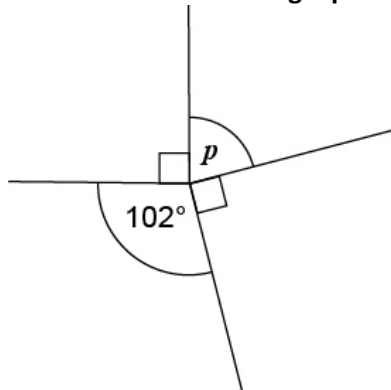**Use three of these fraction cards to complete the sum below.**

$\boxed{}$ + $\boxed{}$ + $\boxed{}$ = $\frac{1}{2}$

Here is a diagram for sorting numbers.
Write each number in its correct place on the diagram.

2   20   201   2000

| two-digit numbers | multiples of 5 | three-digit numbers |

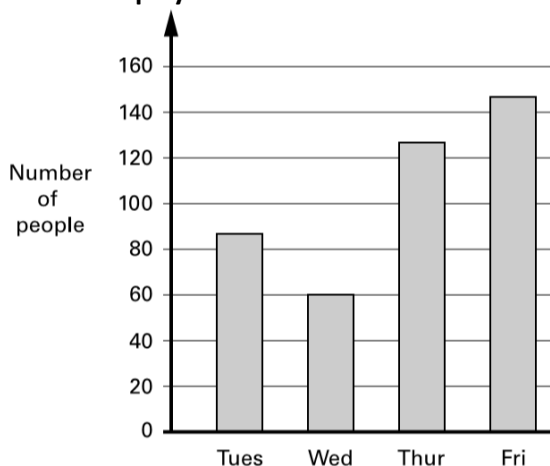**Calculate the size of angle p in the diagram.**
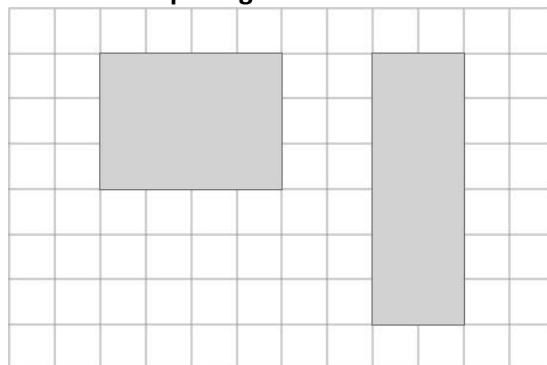

102°

This bar chart shows how many people went to a school play.

Number of people

Estimate the number of people who went there on Thursday and Friday altogether.

Each person paid £2.25 for a ticket to get in. How much ticket money was collected on Wednesday?

Look at the shaded rectangles drawn on a centimetre square grid.

Sam says, *"The two rectangles have the same area as each other and the same perimeter as each other."*
Is Sam correct? Explain how you know.

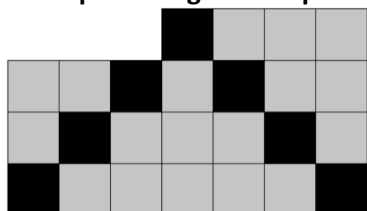**Three single-digit numbers multiply to make 504**
Write the missing numbers

$\boxed{}$ × $\boxed{}$ × $\boxed{}$ = 504

Parveen buys 3 small bags of peanuts.
She gives the shopkeeper £2 and gets 80p change.
What is the cost in pence of one bag of peanuts?

Look at this pattern.
What percentage of the pattern is black?
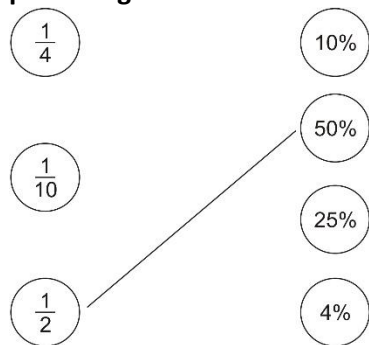

When full, Sam's bottle holds a litre of water. Sam drinks some.
Estimate the amount of water left.
Circle the best estimate.

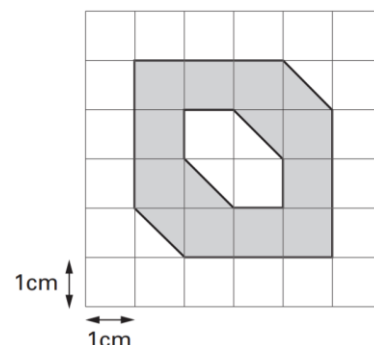800 ml   600 ml   80 ml

70 ml   7 ml

1

Write in figures the number twenty thousand and twenty.

Michelle has saved £8.40 in 20p coins.
How many 20p coins does Michelle have?

Draw a line to join each fraction to a percentage of the same value.

$\frac{1}{4}$ 10%

50%

$\frac{1}{10}$

25%

$\frac{1}{2}$ 4%

Here is a 1cm square grid.
Some of the grid is shaded.
What is the area of the shaded shape?

1cm

1cm

This weather chart shows the highest and lowest temperatures in a town on five days in March.

	Temperature °C	
	highest	lowest
Monday	+7	0
Tuesday	+7	−2
Wednesday	+8	−2
Thursday	+9	+1
Friday	+4	−5

Which day has the greatest difference between the highest and the lowest temperatures?

What is the difference between the lowest temperatures on Thursday and Friday?

Here is part of a net for a cuboid.
Draw in the missing face to complete the net.
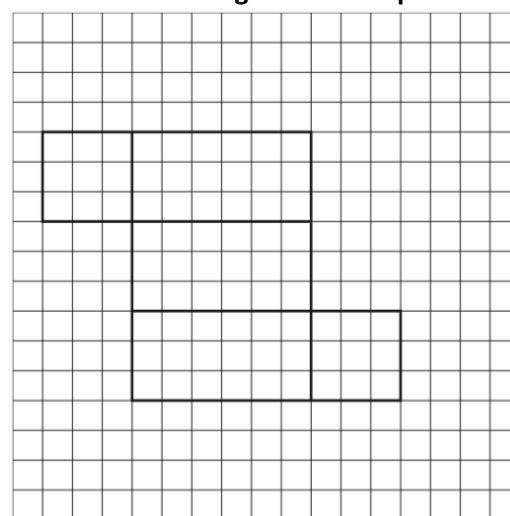
Here is a number chart. Circle the smallest number on the chart that is a multiple of both 2 and 7

71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Here is the same number chart. Circle the largest number that is not a multiple of 2 or 3 or 5

71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

(7, 8)

(4, 6)   C

B   (7, 5)   (9, 5)

(1, 4)

A   (4, 3)   (6, 3)

(1, 1)   (3, 1)
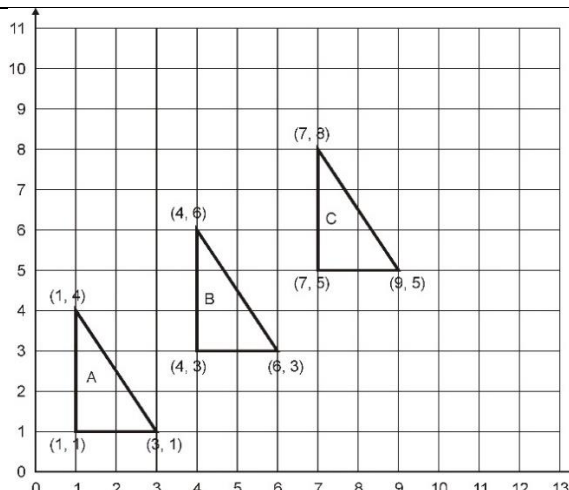
Write the co-ordinates of the next triangle in the sequence.

14 × 15 × 16 = 3,360
What is the answer to

15 × 16 × 14 =

Circle the percentage that is equal to $\frac{7}{20}$

7%   35%   70%   20%   140%

2

KeyStage2Maths.com

Jordan, Anna and Ryan collect picture cards.
Cards are worth either 50 points or 100 points.
This table shows the cards they have.
Complete the table for Anna and Ryan.

	50 points	100 points	total number of points
Jordan	5 cards	2 cards	450 points
Anna	3 cards	☐ cards	550 points
Ryan	4 cards	6 cards	☐ points

Shade two squares and one triangle to make this design symmetrical about the mirror line.
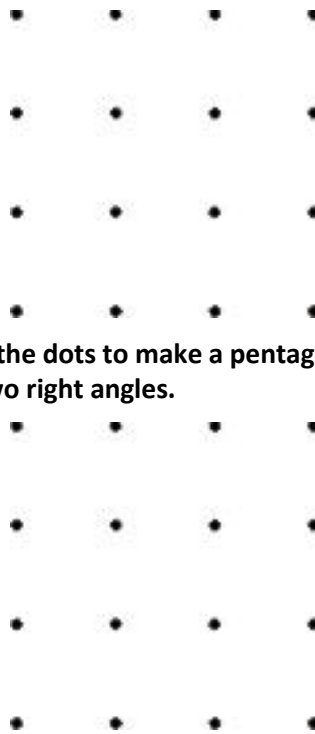

mirror line
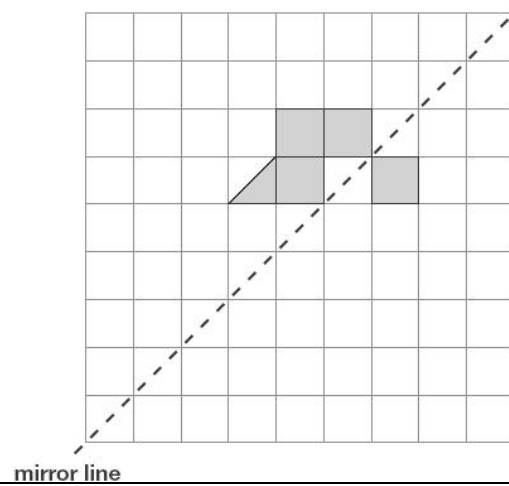
Here is a shape on a square grid.
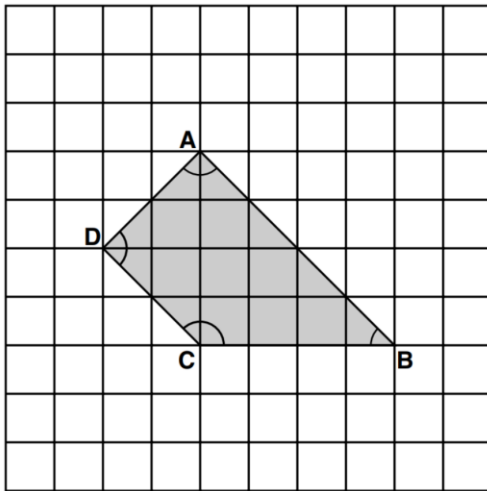
For each of the four sentences below, put a tick if it is true. Put a cross if it is not true.

1) Angle C is an obtuse angle.

2) Angle D is an acute angle.

3) Line AD is parallel to line BC.

4) Line AB is perpendicular to line AD.

Join the dots to make a pentagon with only one right angle.

Now join the dots to make a pentagon with exactly two right angles.

In the circle write +, −, ×, or ÷ to make the calculation correct.

$18 \bigcirc 3 \times 5 = 30$

Circle the numbers that are multiples of 7

27   42   52   63   77

Emma uses 5 shapes to balance a 50 g weight on a scale. Each square weighs 12 g.
How much does each circle weigh?

Sapna makes a fruit salad using bananas, oranges and apples.
For every one banana, she uses 2 oranges and 3 apples.
Sapna uses 24 fruits.
How many oranges does she use?

Liam thinks of a number.
He divides it by 9 and then adds 25 to the result.
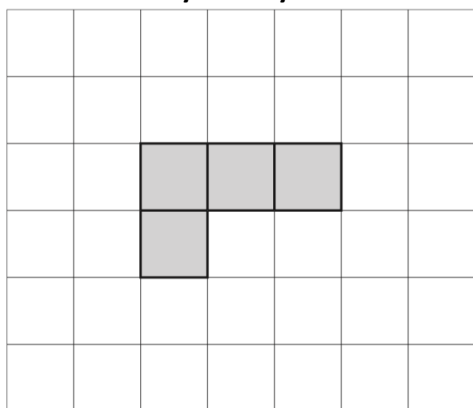His answer is 36
What number did Liam start with?

Seb bought 2 apples and 3 pears.
He spent £1.59 altogether.
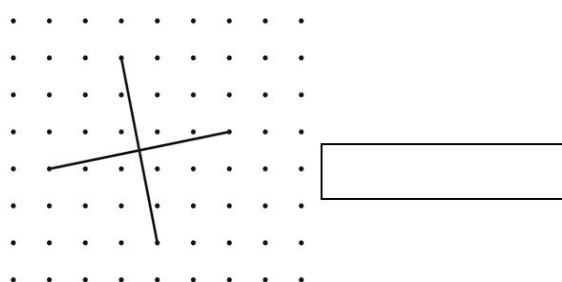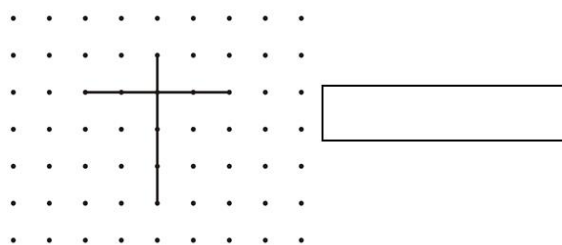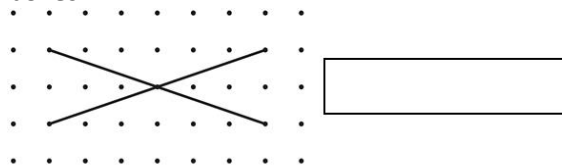Apples cost 24p each.
How much does one pear cost?

3

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Here is a grid with four squares shaded in. Shade in one more square to make a shape with a line of symmetry.
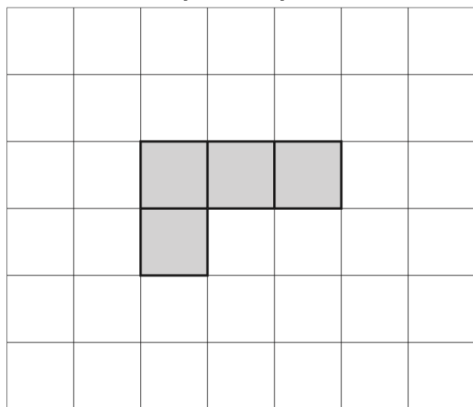
**Shade in a different square to make a shape with a line of symmetry.**

These diagrams show the diagonals of three quadrilaterals. Write the names of the quadrilaterals in the boxes.

The temperature inside an aeroplane is 20°C. The temperature outside the aeroplane is –30°C. What is the difference between these temperatures?
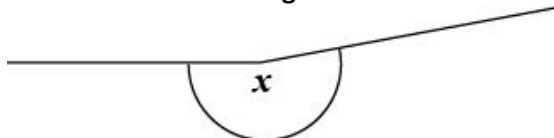
15% of the people walk 5 km or less. 40% of the people walk 8 km or more. What percentage of the people walk between 5 km and 8 km?

20

2   10

2   5
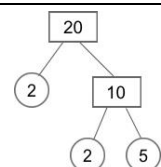
Any number can be written as a product of its prime factors, for example: 20 = 2 × 2 × 5

Write 90 as a product of its prime factors.

**Estimate the size of angle x.**

x

Circle the closest estimate.

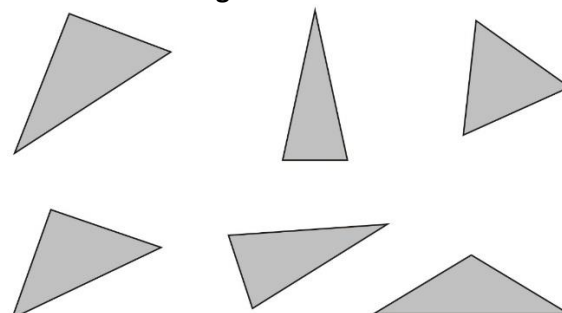170°   310°   190°   260°   180°

Here is a number written in Roman numerals.
 DCCIX
Write the number in figures.

Programmes cost 15p each. Selling programmes raises £12.30 How many programmes are sold?

**One number is in the wrong place on the sorting diagram. Put a cross on it.**

multiples of 10   numbers greater than 100

90   105

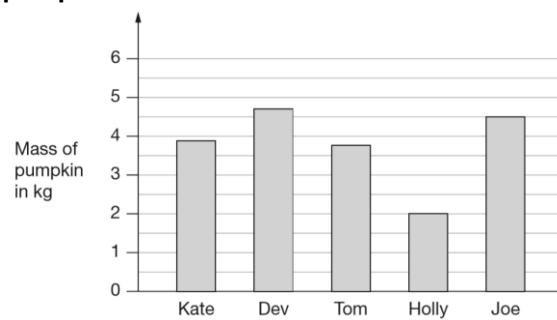200   171

42
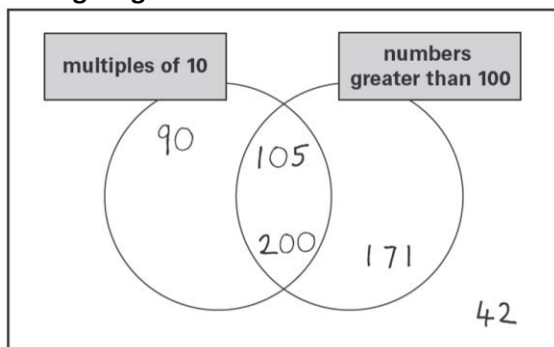
Here are six triangles.

One of them is an equilateral triangle. Put a tick in the equilateral triangle.

4

These nets will fold to make 3-D shapes.
Match each net to the name of its shape. One has been done for you.

square – based pyramid

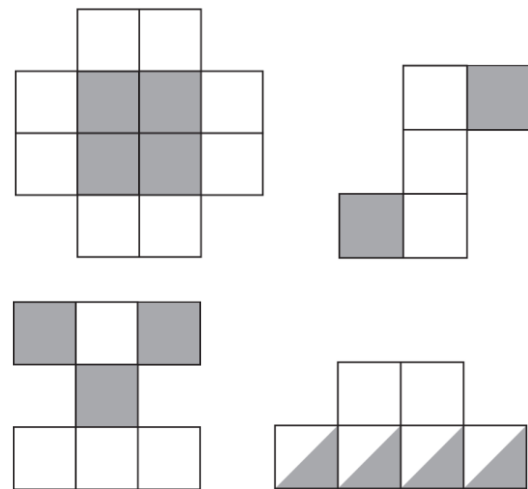triangular prism

cube

square

tetrahedron

cuboid
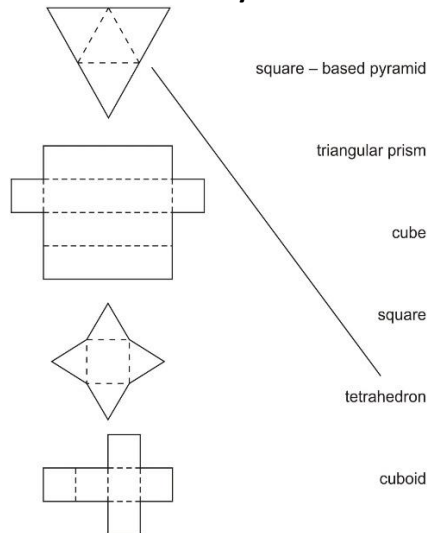
Five children grow pumpkins.
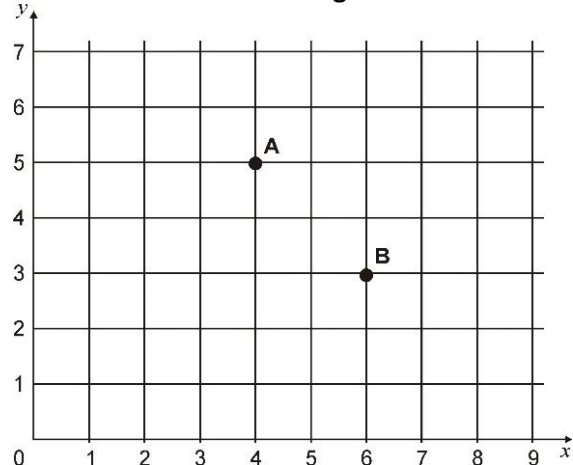This bar chart shows how heavy their pumpkins are.

How much heavier is Joe's pumpkin than Holly's?

What is the mass of Dev's pumpkin to the nearest kilogram?

These diagrams are all made of squares.

Put a tick if exactly $\frac{1}{3}$ is shaded. Put a cross if it is not.

A, B, C and D are the vertices of a rectangle.
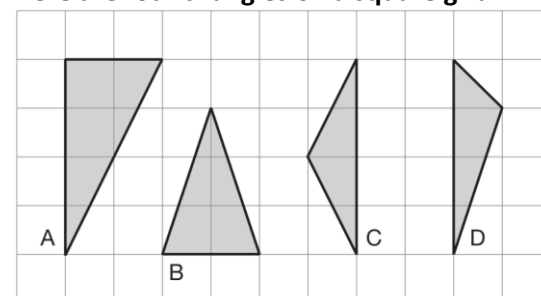A and B are shown on the grid.

D is the point (3, 4).
Write the coordinates of point C.

Here is a sorting diagram for numbers.
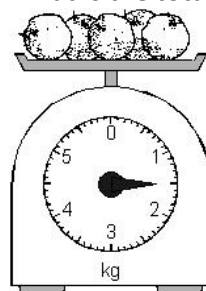Write a number less than 100 in each space.

	even	**not** even
a cube number		
not a cube number		

Here are four triangles on a square grid.
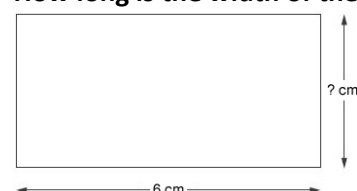

Write the letters of the two isosceles triangles.
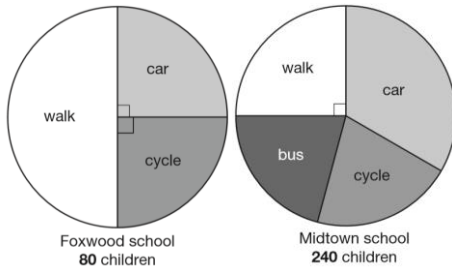
What is the total mass of these apples?

kg

The perimeter of this rectangle is 20 cm.
The length is 6 cm.
How long is the width of the rectangle?

? cm

6 cm

5

Megan asked children from two different schools, 'How do you travel to school?' Here are her results.

Foxwood school
80 children

Midtown school
240 children

Megan says, 'The number of children walking to Foxwood school is more than the number walking to Midtown school.'
Is she correct? Explain how you know.

At Midtown school, one third of children travel by car. The number of children who cycle is the same as the number who go on the bus. How many children cycle to Midtown school?
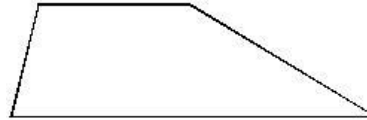
Look at this quadrilateral.
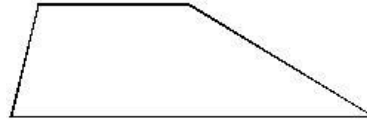
You can draw one line on the quadrilateral to make two triangles.
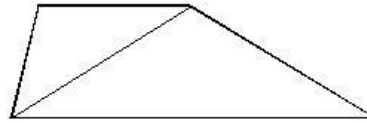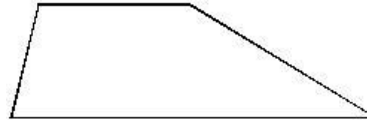

Use a ruler to draw a line in a different place on the quadrilateral to make two triangles.

Now draw one line on the quadrilateral to make a quadrilateral and a triangle.

Now draw one line on the quadrilateral to make two quadrilaterals.

Write these temperatures in order from hottest to coldest.

92°C

37°C

−12°C

73°C

12°C

−2°C

_____ hottest

_____

_____

_____

_____

_____ coldest

Jack has two square-based pyramids that are the same size. He sticks the square faces together to make a new 3-D shape. How many faces and how many edges does his new 3-D shape have?

  Faces:

  Edges:

Here are fractions.
Circle the improper fractions.

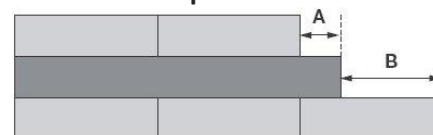$\frac{4}{2}$ $\frac{2}{5}$ $\frac{10}{3}$ $\frac{6}{4}$ $\frac{4}{10}$

Which fraction is equivalent to $1\frac{1}{2}$?

Which two fractions are equivalent?

Liam has two different sizes of rectangle.

45cm   20cm

He makes this pattern with them.

A

B

Calculate the lengths of A and B.

Write the missing numbers.

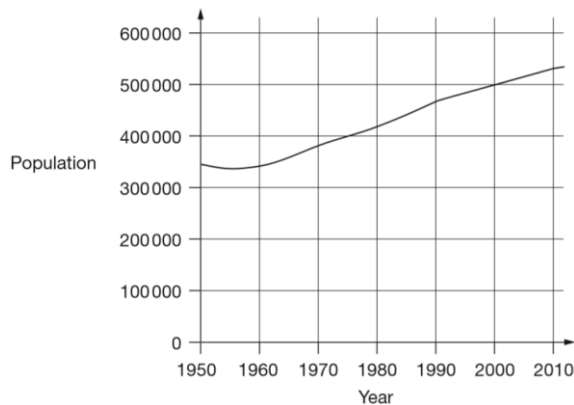[   ]   is 1000 more than   →   19 999

39 001   →   is 1000 more than   [   ]

Circle the fraction that is greater than $\frac{1}{2}$ but less than $\frac{3}{4}$

$\frac{7}{8}$ $\frac{2}{5}$ $\frac{1}{3}$ $\frac{5}{8}$ $\frac{3}{6}$

This chart shows the population of Cornwall from 1950 to 2010.

In which year did the population first reach 400 000?

How much did the population increase from 1950 to 2000?

What was the population of Cornwall in 2010?

Here is part of the morning bus timetable from Winton to Yansley.

Winton	9:35	9:55	10:15	10:35
Ingham	9:45	10:05	10:25	10:45
Carston	10:01	10:21	10:41	11:01
Dubley	10:23	10:43	11:03	11:23
Yansley	10:55	11:15	11:35	11:55

How many minutes does the bus take to get from Ingham to Dubley?
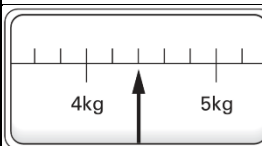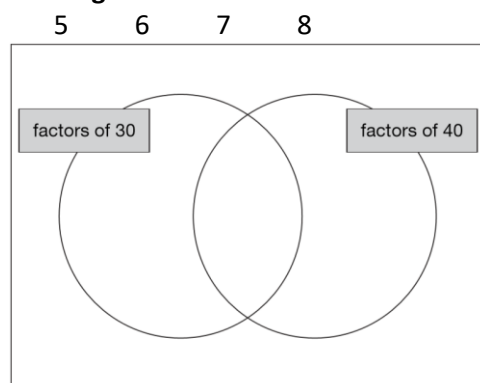
**Megan is in Carston.
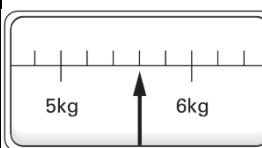She wants to be in Yansley before 11:30
What is the time of the latest bus she can take from Carston?**

One morning, the 10:35 bus from Winton gets to Carston 3 minutes early. What time does it get to Carston?
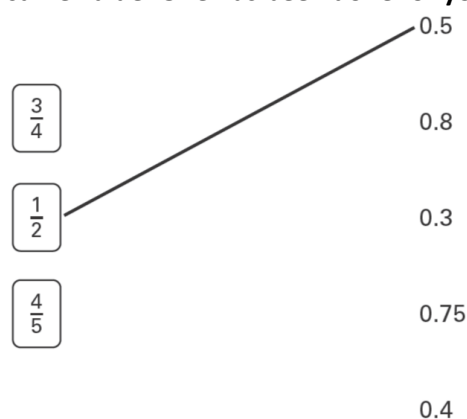

Write these numbers in the correct places on the diagram.

5   6   7   8

factors of 30		factors of 40

This scale shows the weight of Fred's cat. What is the weight of Fred's cat?

4kg   5kg

This scale shows the weight of Fred's dog. How much more does Fred's dog weigh than his cat?

5kg   6kg

Match each box to the number which has the same value. One has been done for you.

$\frac{3}{4}$ 0.5

$\frac{1}{2}$ 0.8

$\frac{4}{5}$ 0.3

        0.75

        0.4

The table shows the cost of coach tickets to different cities.

		Hull	York	Leeds
Adult	single	£12.50	£15.60	£10.25
	return	£23.75	£28.50	£19.30
Child	single	£8.50	£10.80	£8.25
	return	£14.90	£17.90	£14.75

What is the total cost for a return journey to York for one adult and two children?

How much more does it cost for two adults to make a single journey to Hull than to Leeds?
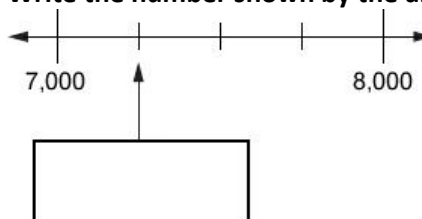

Write the missing fractions.

$\frac{4}{11} + \frac{3}{11} + \boxed{} = \frac{12}{11}$

$\frac{3}{5} + \boxed{} - \frac{2}{5} = \frac{7}{5}$

**Here is part of a number line.
Write the number shown by the arrow.**

7,000   8,000

7

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Here is a number chart that goes up in fives.

5	10	15	20	25
30	35	40	45	50
55	60	65	70	75
80	85	90	95	100
105	110	115	120	125

The chart continues in the same way. One of the numbers below will be at the <u>start</u> of a row on the chart. Circle the number.

445   455   465   475   485

One of the numbers below will be at the <u>end</u> of a row on the chart. Circle the number.

345   355   365   375   385

square   parallelogram   rhombus

oblong   kite   trapezium

Here are six quadrilaterals.
Lara chooses one of the quadrilaterals. She says, 'It has two acute angles. All four sides are the same length.' Which quadrilateral did Lara choose?
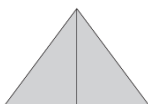
Stefan chooses one of the quadrilaterals. He says, 'It has more than one obtuse angle. It has no parallel sides.' Which quadrilateral did Stefan choose?

Jody has some triangular tiles.

5cm   4cm
3cm

He uses two of these tiles to make different shapes.
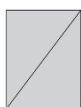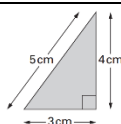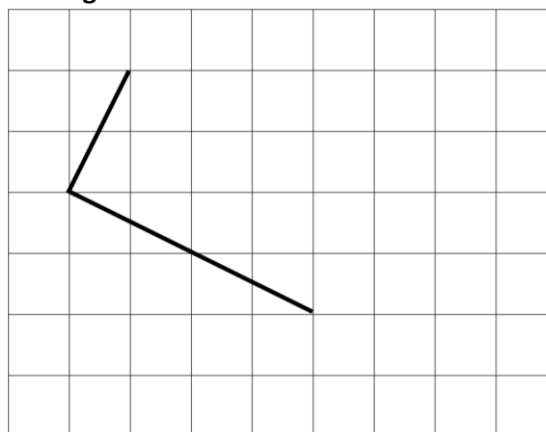
The perimeter of the rectangle is:

The perimeter of the isosceles triangle is:

The perimeter of the quadrilateral is:

Draw two more straight lines to make a rectangle.

Here are six digit cards.

2   3   4   5   6   7

Use <u>all six</u> digit cards to make three multiples of 3.

multiple of 3   multiple of 3   multiple of 3

Write these in order of size, starting with the smallest.

$\frac{3}{4}$ 0.34   0.7   43%

smallest

Sarah, Amy and Liam stand on some weighing scales two at a time.
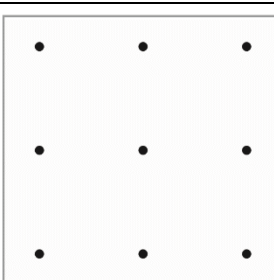**Here are the measurements:**
Sarah and Amy – 70 kg
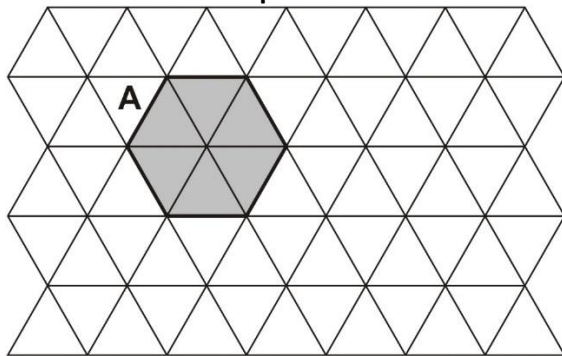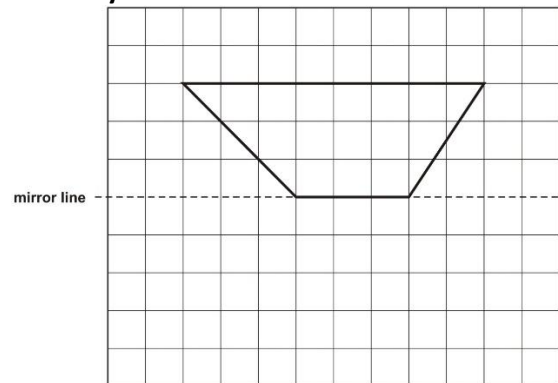Sarah and Liam – 80 kg
Liam and Amy – 80 kg
How much does Liam weigh?

On the grid join dots to make a triangle which does not have a right angle.

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On this grid draw a different shape which has the same area as shape A.

**Complete the diagram below to make a shape that is symmetrical about the mirror line.**

mirror line

Here is the calendar for August 1998.

August 1998

Sun	Mon	Tues	Wed	Thur	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Simon's birthday is on August 20th.
In 1998 he had a party on the Sunday after his birthday.
What was the date of his party?

Tina's birthday is on September 9th.
On what day of the week was her birthday in 1998?

This graph shows the distance Alfie and Chen walked in an afternoon. They started at 1:45pm and had two breaks.
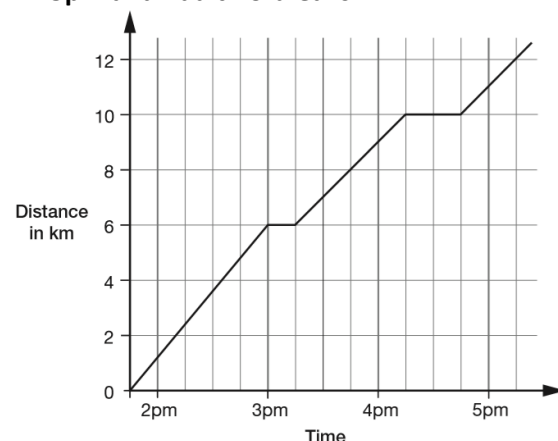
How many kilometres did they walk between the first and second breaks?

At what time did Alfie and Chen start their second break?

Big Wheel
£2.50
each ride

Rollercoaster
£1.50
each ride

**Liam spends £14 altogether on the Big Wheel and the Rollercoaster.
He goes on the Big Wheel twice.
How many times does he go on the Rollercoaster?**

This shape is made out of four identical curves. The perimeter of the shape is 28 centimetres.

**A new shape is made out of curves of the same size.
What is the perimeter of the new shape?**

**36 and 64 are both square numbers.
They have a sum of 100
Find two square numbers that have a sum of 130**

Write these numbers in order of size, starting with the smallest.

1.01   1.001   1.101   0.11

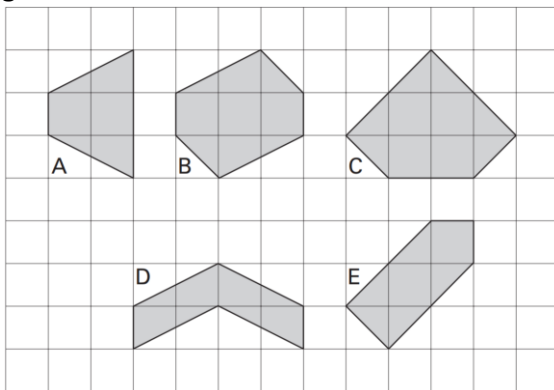|			

smallest

Estimate the answer to this calculation.
23,901 – 5,097
Circle the correct estimate.

6,000   17,000   18,000   19,000   20,000

**Books are 25p each at a car boot sale.
Alfie wants to buy 12 books.
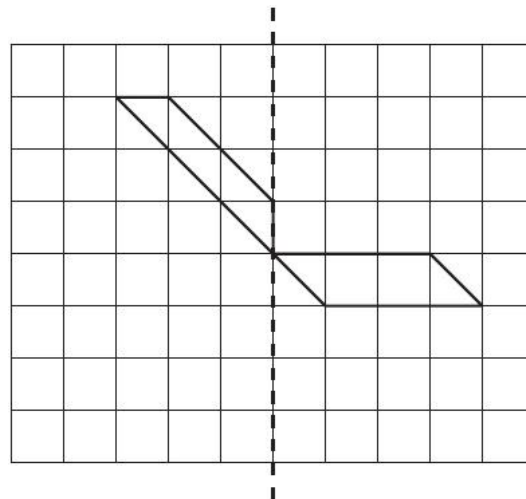He only has £2.35
How much more money does Alfie need?**

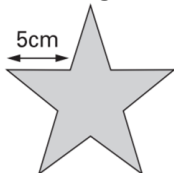Here are some shaded shapes on a square grid.

Write the letters of the two shapes which are hexagons.

Write the letters of the two shapes which have right angles.

Here is a design on a square grid. Complete the design so that it is symmetrical about the mirror line.
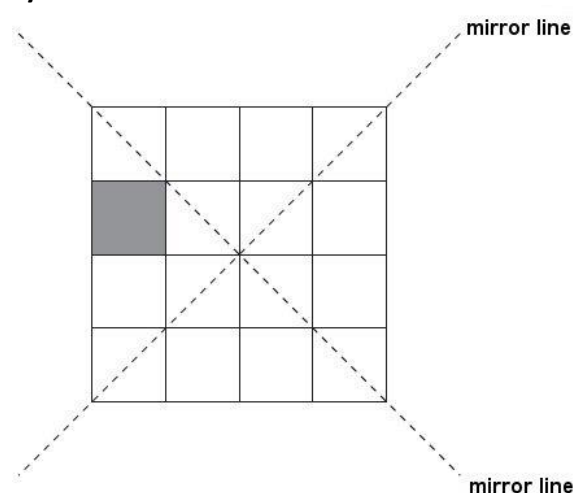

Millie has some star-shaped tiles.
Each edge of a tile is 5 centimetres long.

She puts two tiles together to make this shape.
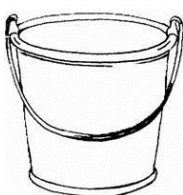Work out the perimeter of Millie's shape.

Here is a shaded square on a grid.
Shade in 3 more squares so that the design is symmetrical in both mirror lines.
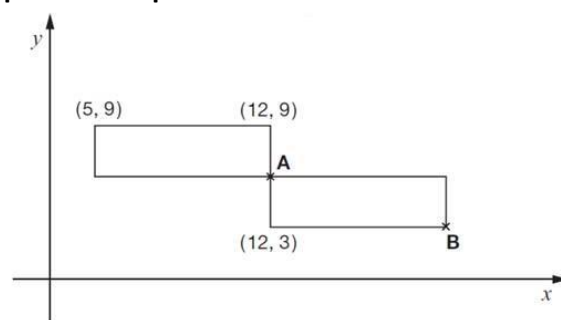

This jug holds ½ litre.

This bucket holds 5 litres.

How many full jugs of water are needed to fill the bucket?

This diagram shows two identical rectangles on coordinate axes. Write the coordinates of point A and point B.

Write in the missing digits.

$323 \times \boxed{}7 = 1518\boxed{}$

The three numbers missing from these boxes are all prime numbers greater than 3
Write in the missing prime numbers.

$\boxed{} \times \boxed{} \times \boxed{} = 1001$
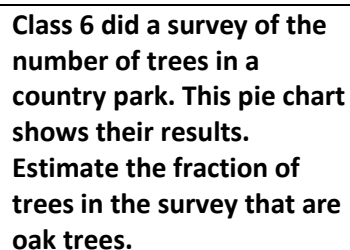
Write the missing numbers.

Factors of 20 = {1, ___ , ___ , ___ , ___ , 20}

Circle the numbers that are equal to $\frac{1}{2}$

0.12   0.5   5.0   0.05   0.50

10

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Class 6 did a survey of the number of trees in a country park. This pie chart shows their results. Estimate the fraction of trees in the survey that are oak trees.

The children counted 60 ash trees.
Use the pie chart to estimate the number of beech trees they counted.

Shade in the reflection of this shape.

mirror line

Look at these shapes.
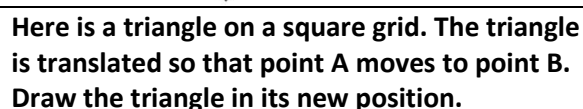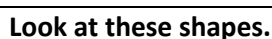
Complete the sentences below.

__is a kite

__is not a quadrilateral

__has only 2 right angles

__has 2 acute angles

Here is a triangle on a square grid. The triangle is translated so that point A moves to point B. Draw the triangle in its new position.
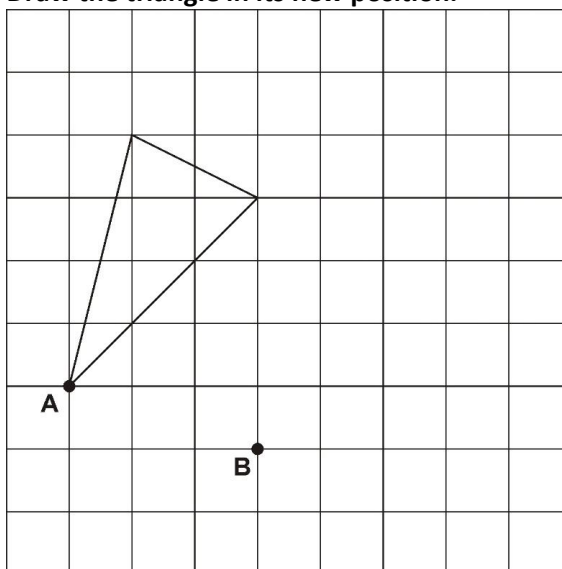
Circle all the multiples of 10.

640   500

        404

170   26   195

    30   531

This table shows information about four solid shapes. One has been done for you.

	number of **flat** surfaces	number of **curved** surfaces
sphere	0	1
cone		
cuboid		
cylinder		

Write all the factors of 30 which are <u>also</u> factors of 20

Circle the number that is closest to 20

19.95   20.1   19.09   20.09   20.201

Circle the value of the digit 9 in the number
6 9 7, 4 3 2
    nine thousand
    nine hundred
    ninety thousand
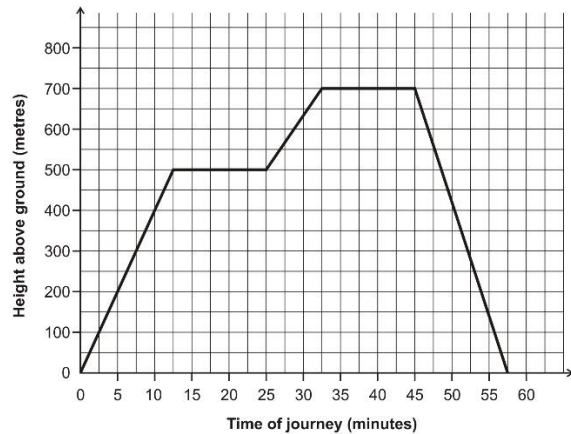   nine million
    nine hundred thousand

Joe goes skating every Saturday.
He went skating on Saturday January 1st.
Altogether, how many times did Joe go skating in January?

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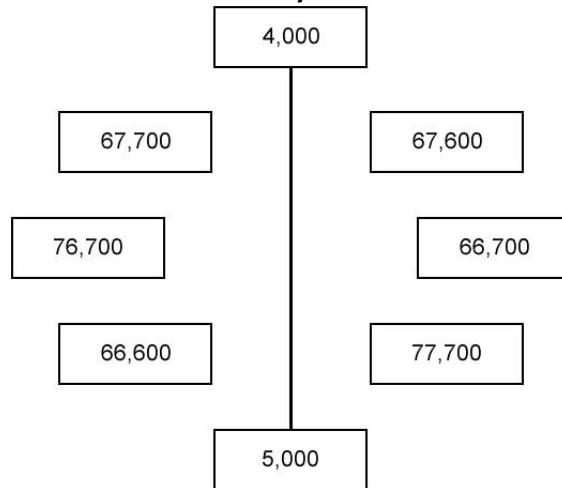**The graph shows the journey of a hot-air balloon.**

At what height above the ground was the balloon after 10 minutes?

After how many minutes of the journey did the balloon begin to go down?

Match pairs of numbers that have a difference of 1000
One has been done for you.

4,000

67,700   67,600

76,700   66,700

66,600   77,700

5,000

Temperatures °C	
London	-4ºC
Moscow	-6ºC
New York	-9ºC
Paris	+6ºC
Sydney	+14ºC

Here is a table of temperatures at dawn on the same day.

What is the difference in temperature between London and Paris?

At noon the temperature in New York has risen by 5°C.
What is the temperature in New York at noon?

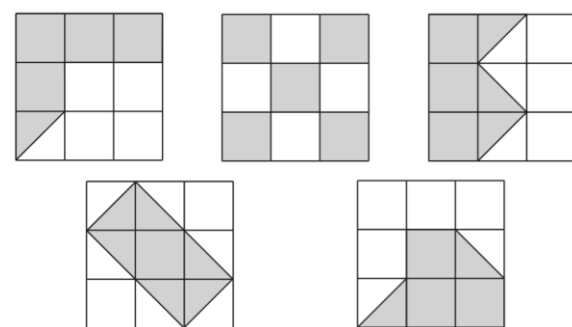**Use a ruler to draw 2 more lines to make an isosceles triangle.**
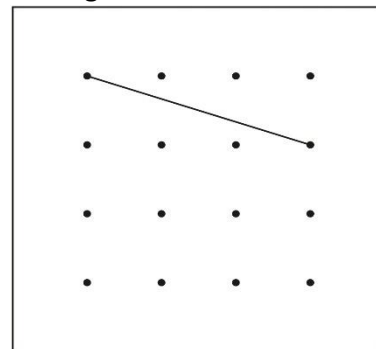
Ben has a rectangle (A) and a square (B).
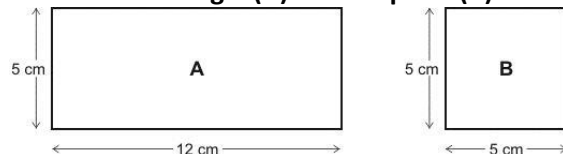
Ben puts B directly on top of A.
What is the length of x?
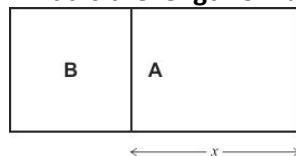
Put a tick on the diagram if exactly $\frac{1}{2}$ of it is shaded.

In a supermarket storeroom there are:
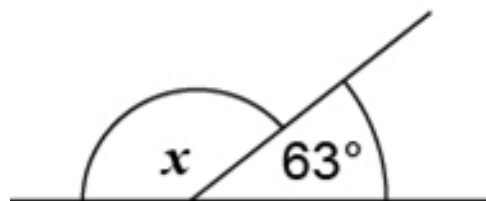**7 boxes of tomato soup**
5 boxes of pea soup
4 boxes of chicken soup
There are 24 tins in every box.
How many tins of soup are there altogether?

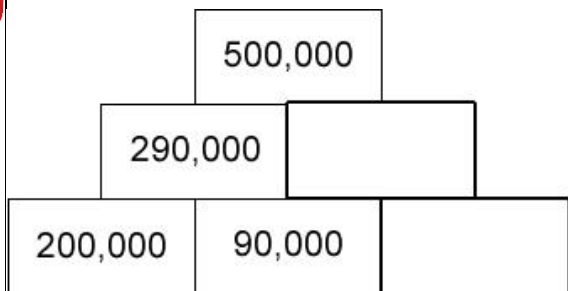Calculate the size of angle x in the diagram.

x 63°

Put these temperatures in order, starting with the lowest.

21°C   −13°C   −24°C   0°C   35°C

°C	°C	°C	°C	°C

lowest

Circle all the prime factors of 30

2   3   5   6   10

Here is a number pyramid.

500,000

290,000

200,000   90,000

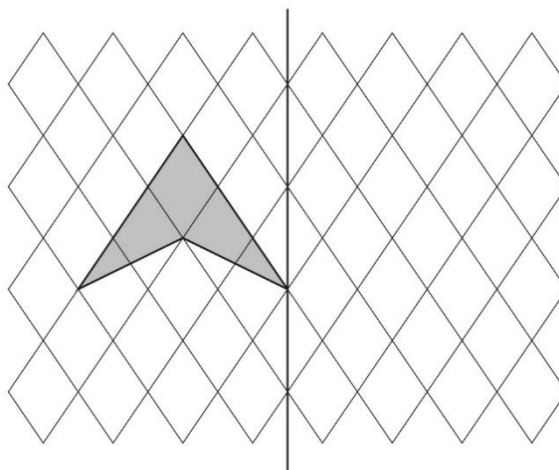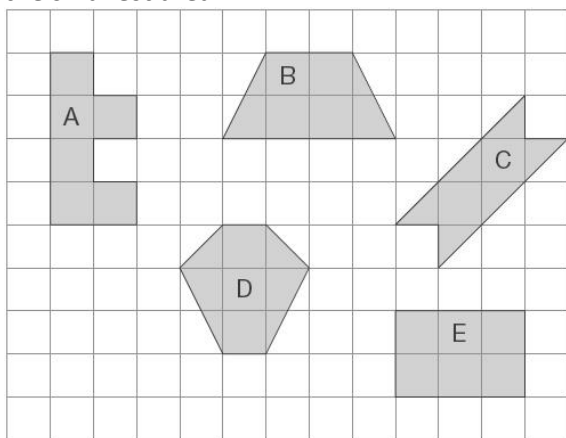**The number in a box is the sum of the two numbers below it.**
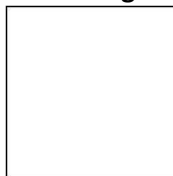**Write the missing numbers.**

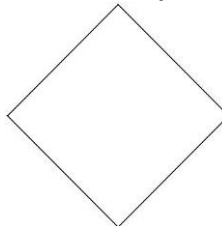**Draw the reflection of the shaded shape in the mirror line.**

Here are some shapes on a 1cm square grid.
Write the letter of the shape that has the smallest area.

A
B
C
D
E

Draw two lines on the square below to make four triangles that are all the same size.

Now draw two lines on the square below to make four squares that are all the same size.

A pack of 20 postcards costs £3.60
A single postcard costs 20p.
Zak buys 1 pack of postcards. Jade buys 20 single postcards.
Zak says to Jade, 'My postcards cost 40p less than yours.'
Is he correct? Explain how you know.

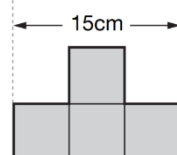**Match each percentage to its correct decimal equivalent.**

5%   0.5

            0.4

55%   0.55

            0.05

40%   0.04

2   4   6   8

Use all four digit cards to make this number sentence correct.

☐☐ × ☐☐ > 5000

← 15cm →

This shape is made from 4 shaded squares.
Calculate the perimeter of the shape.

23 × 36 = 23 × 9 × ☐

A machine only takes 20p coins.
The coins inside total £9.80
How many 20p coins are there?

13

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Here is a regular octagon with two vertices joined to make the line AB.
Join two other vertices to draw one line that is parallel to the line AB.
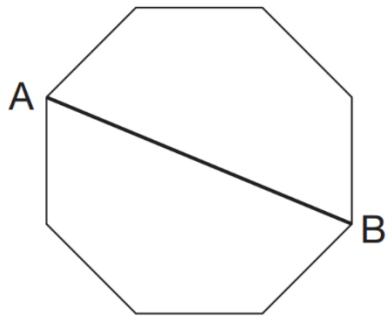
Here is the octagon again.
Join two other vertices to draw one line that is perpendicular to the line AB.
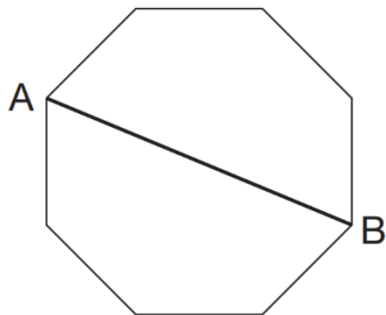
Here is a number chart.
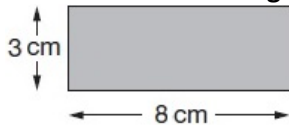Every third number in the chart has a circle on it.

1	2	③	4	5
⑥	7	8	⑨	10
11	⑫	13	14	⑮
16	17	⑱	19	20
㉑	22			

The chart continues in the same way. Here is another row in the chart.
Draw the missing circles.

71	72	73	74	75

Will the number 1003 have a circle on it?
Explain how you know.
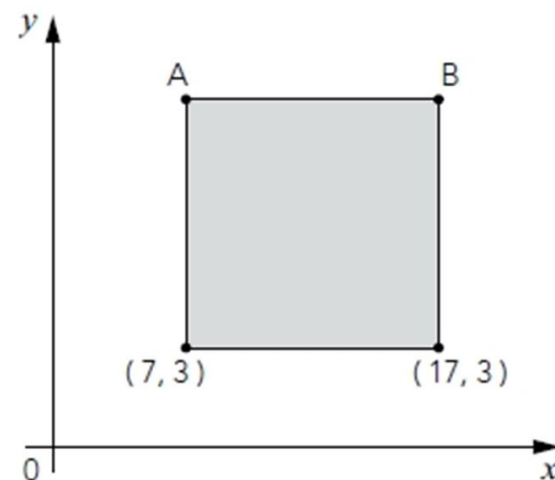
Alfie has some rectangles.

3 cm
8 cm

He makes this shape using three of the rectangles.

What is the perimeter of Alfie's shape?

The shaded shape is a square.
What are the coordinates of A and B?

(7, 3)   (17, 3)

364 is a multiple of 7 but not a multiple of 3
384 is a multiple of 3 but not a multiple of 7
Find a number between 364 and 384 that is both a multiple of 7 and a multiple of 3

On a school trip, every child is given 2 apples and 5 cherries.
Mrs Smith gives her group 12 apples.
How many cherries does she give her group?

Tick all the numbers that are equivalent to $\frac{13}{100}$

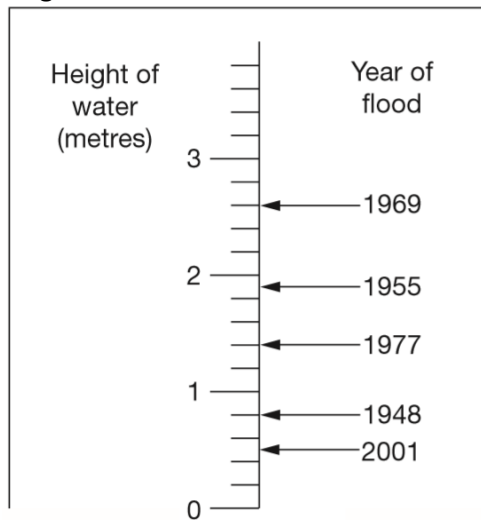0.013   1.3   0.13   0.103   0.130

A torch costs £7.65
Kate buys a torch and two batteries.
She pays £8.75 altogether.
How much does one battery cost?

How many quarters are there in $2\frac{3}{4}$?

Circle the fractions that are equal to 80%

$\frac{8}{10}$ $\frac{1}{80}$ $\frac{4}{5}$ $\frac{80}{100}$ $\frac{8}{80}$

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This scale shows the dates of floods and the height of the water in the floods.

Height of water (metres)

Year of flood

3
── 1969
2
── 1955
── 1977
1
── 1948
── 2001
0
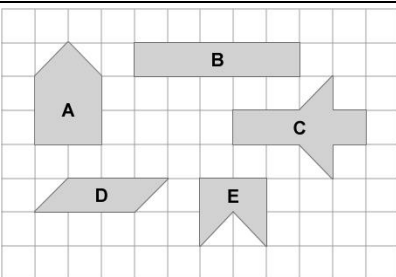
How high was the water in the 1955 flood?

How much higher was the water in the 1969 flood than in the 1948 flood?

A, B, C and D are the vertices of a rectangle.
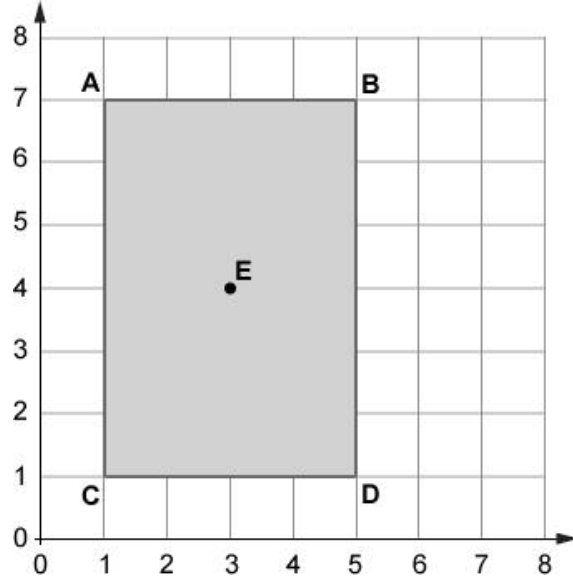
Write the coordinates of point B.

Point E is the centre of the rectangle. Write the coordinates of point E.

The diagram shows some shapes on a centimetre square grid. Which two shapes have the same perimeter as shape A?

**Here is a table. The tick in the box shows that 20 is a multiple of 10
Put four more ticks to complete the table.**

	12	15	20
multiple of **10**			✓
multiple of **2**			
multiple of **5**			

**A rectangle has an area of 36 cm².
How long could the sides of the rectangle be?
Give three different examples, using whole numbers.**

**Megan wants to fill a bucket with water.
A bucket holds 6 litres. A jug holds 500 millilitres.
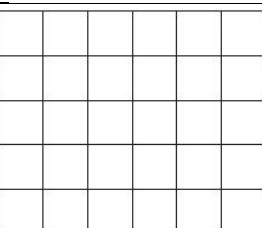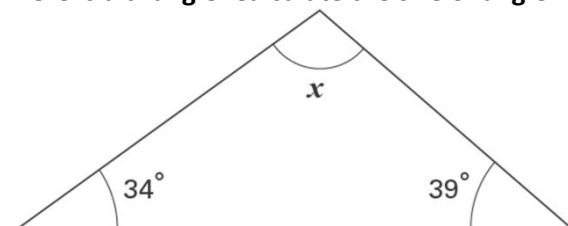How many jugs of water does Megan need to fill an empty bucket?**

Part of this number line is shaded.

0   1   2

Circle all the numbers below that belong in the shaded part of the number line.

1.1   1.4 $1\frac{1}{3}$ $1\frac{1}{5}$

Here is a triangle. Calculate the size of angle x.


x

34°   39°

**Here is a grid made of squares.
Shade 10% of this grid.**

**Mari is the presenter of a weekly radio show.
She always plays five new songs for every two old songs.
Last week she played 15 new songs.
How many songs did she play altogether?**

15

Here is a square grid. Two sides of a kite are drawn on the grid. Complete the kite by drawing the two missing sides.
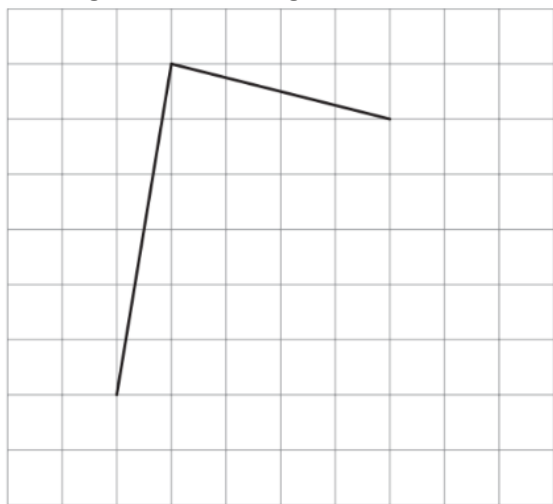
This shape is made of wooden centimetre cubes.
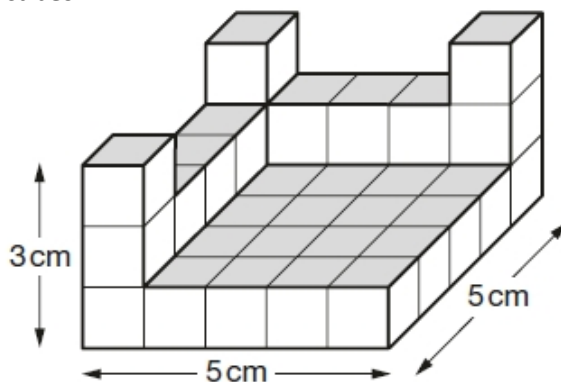
How many more centimetre cubes are needed to make it into a solid cuboid 3 cm tall, 5 cm long and 5 cm wide?

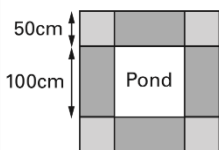PAVING SLABS

£1.95 each   Square slabs
50cm by 50cm

**£3.50** each   Rectangular slabs
100cm by 50cm

Mr Singh buys paving slabs to go around his pond. He buys 4 rectangular slabs and 4 square slabs.
What is the total cost of the slabs he buys?

Mr Singh says, 'It would cost more to use square slabs all the way round.'
Explain why he is correct.

This diagram shows a square with dots at the vertices and at the middle of each side. The square is divided into four triangles, A, B, C and D.
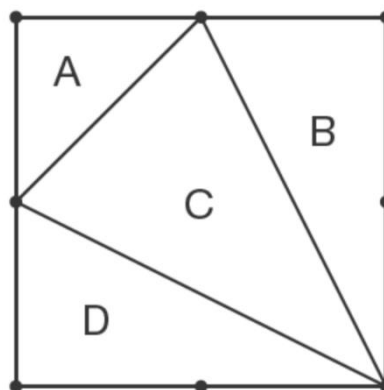
Write the letters of all the triangles that have a right angle.

Write the letters of all the isosceles triangles.

Mina has 5 more marbles than Kirsty.
Kirsty has 2 more marbles than Seb.
Altogether they have 30 marbles.
How many marbles does each child have?

I'm thinking of a 3-D shape.
It has a square base.
It has 4 other faces, which are triangles.
What is the name of the 3-D shape?

Look at these numbers written in Roman numerals.
  MCMVII   MMCD   MDCCXLIII   MMDX
Circle the largest number.

What is the value of the smallest number?

A shop sells jars of honey and honey dippers.
Chen bought three jars of honey and a dipper.
The total cost was £5.40
The dipper cost 75p.
How much did each jar of honey cost?
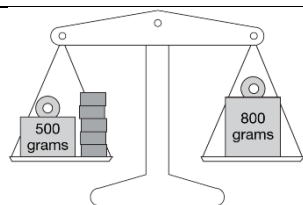
Lin has five blocks which are all the same.
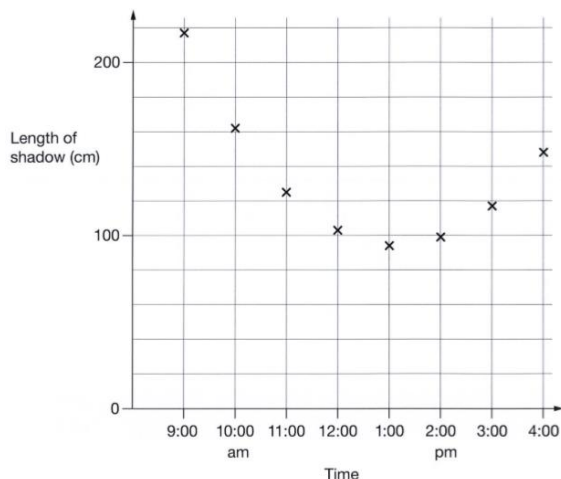**She balances them on the scale with two weights.**
Calculate the weight of one block.

Put these volumes in order, starting with the smallest.
900 ml   ½ litre   1 litre   80 ml

smallest

Kirsty measured the length of her shadow every hour on one sunny day. She plotted her results on this graph.
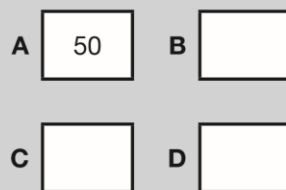

Look at the graph.
Estimate the length of Kirsty's shadow at 3:30pm.

Estimate a time when her shadow was 180 centimetres long.
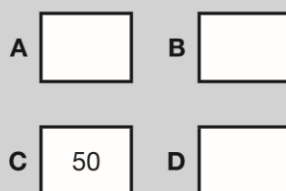

The number in A is twice the number in D.
The number in B is 5 less than the number in C.
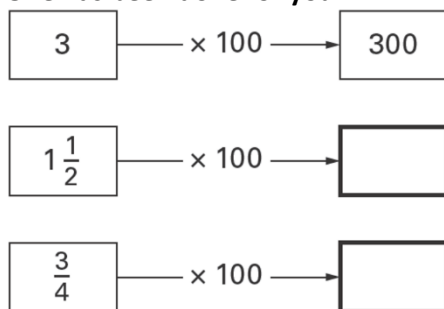The number in D is 10 more than the number in B.
Write the missing numbers in this diagram.

A [50]   B [   ]

C [   ]   D [   ]

Now use the same rule for this diagram.

A [   ]   B [   ]

C [50]   D [   ]

Write in the missing numbers.
One has been done for you.

[3] — × 100 → [300]

[$1\frac{1}{2}$] — × 100 → [   ]

[$\frac{3}{4}$] — × 100 → [   ]

For each of the four sentences below, put a tick if it is true. Put a cross if it is not true.

1) A triangle can have 2 acute angles.

2) A triangle can have 2 obtuse angles.

3) A triangle can have 2 parallel sides.

4) A triangle can have 2 perpendicular sides.

Draw an arrow to show the position for 7,500

0 _____ 10,000
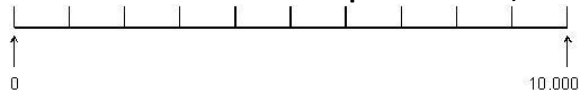
The area of a rectangle is 16 cm².
One of the sides is 2 cm long.
What is the perimeter of the rectangle?

Write the missing fractions.

$\frac{3}{10}$ + $\frac{3}{5}$ + [   ] = $\frac{7}{5}$

$\frac{5}{12}$ + [   ] − $\frac{1}{6}$ = $\frac{7}{12}$

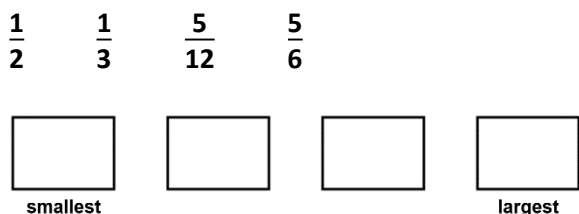A shop sells food for birds.
Bird seed - £3.79 for a bag
Peanuts - £1.35 for a bag
Bird feeder - £8.95 each
Lara has £10 to spend on peanuts.
How many bags of peanuts can she get for £10?

Place these fractions in order of size, starting with the smallest.

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{5}{12}$ $\frac{5}{6}$

[   ]   [   ]   [   ]   [   ]
smallest   largest

Grace made purple paint by mixing three colours.
50% was red
30% was blue
and the rest was white.
What percentage of the purple paint was white?

17

The factor pairs of 8 are

| 1 | and | 8 |

| 2 | and | 4 |

Write all the factor pairs of 42

| 1 | and | 42 |

| 2 | and | |

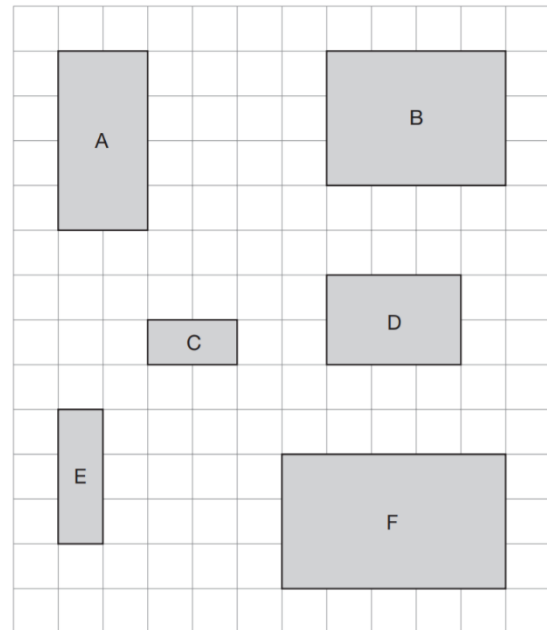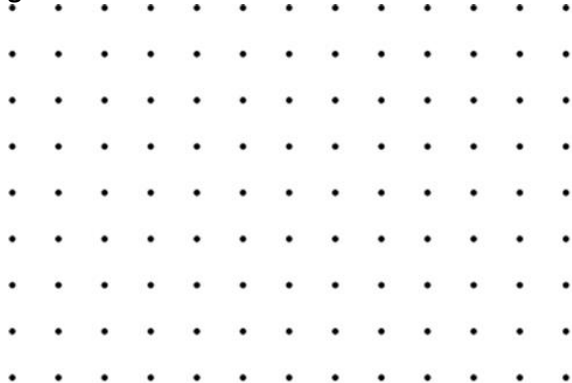| | and | |

| 6 | and | |

Here are six rectangles on a grid. Which two rectangles fit together, without overlapping, to make a square?
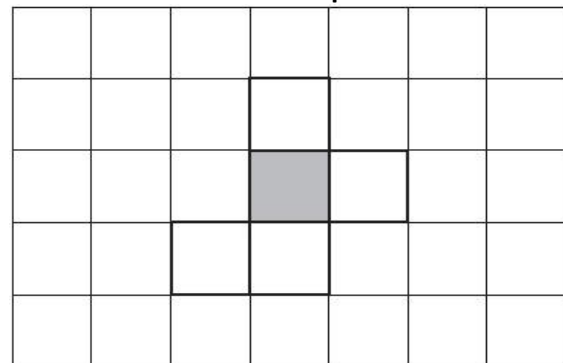

Grace has a rectangle that has sides of 4 cm and 5 cm.
Draw a different rectangle on the centimetre grid below that has the same area.

Here is the net of a cube with no top. The shaded square shows the bottom of the cube. Draw an extra square to make the net of a cube which does have a top.

Kim knows that
137 × 28 = 3836
Explain how she can use this information to work out this multiplication.
138 × 28

Here are five number cards.

| 48 | 49 | 50 | 51 | 52 |

Use each card once to make every statement below correct.

_____ is a multiple of 3

_____ is a multiple of 4

_____ is a multiple of 5

_____ is a multiple of 6

_____ is a multiple of 7

Lara chooses a square number.
She rounds it to the nearest hundred.
Her answer is 200
Write all the possible square numbers Lara could have chosen.
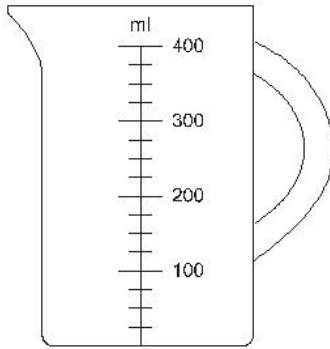
Chen and Megan each have a parcel.
Chen's parcel weighs 1½ kg.
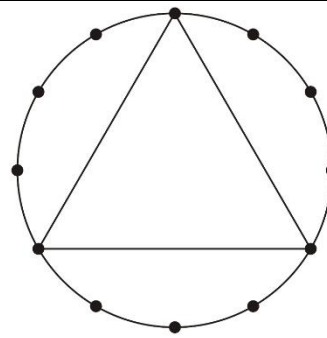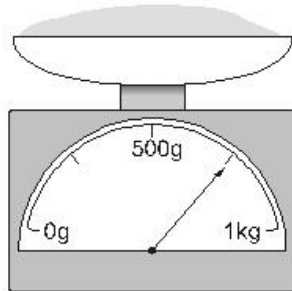**Megan's parcel weighs 1.2kg.**
How many more grams does Chen's parcel weigh than Megan's parcel?

Raj is making a cake.
He pours 275ml of milk into a jug.
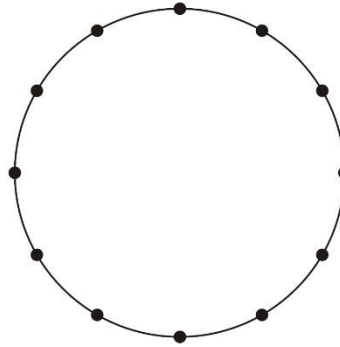Draw a line on the jug to show the level of milk.

The scales below show how much flour he uses. How much flour does Raj use?
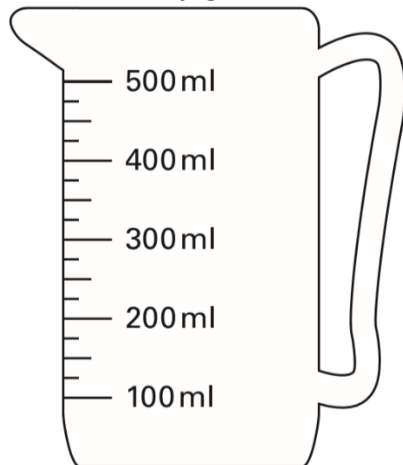

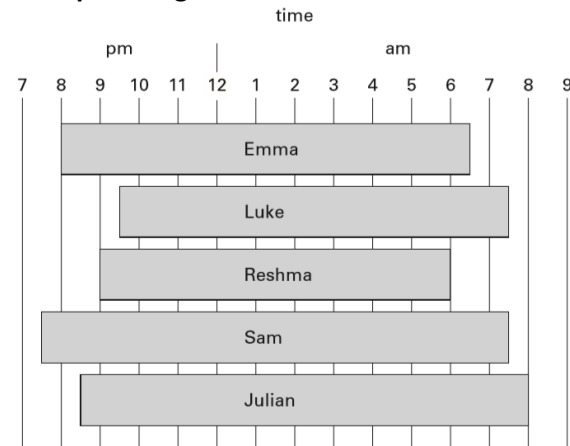Here is an equilateral triangle drawn on a circle.

Use a ruler to draw a regular hexagon on this circle.

Mina has two cartons of juice.
Each carton contains 220ml.
She empties them both into this jug.
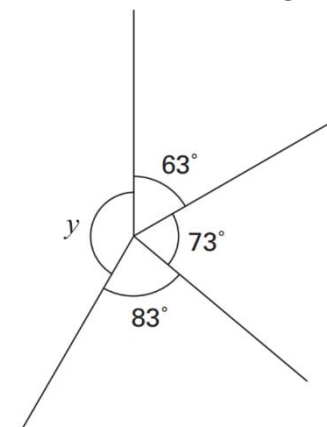Draw an arrow to show the level of the mixture in the jug.

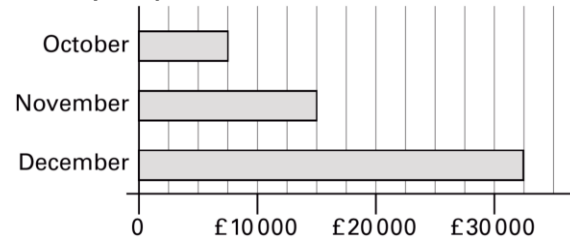This chart shows when some children were asleep one night.

For how many hours was Luke asleep?

How many children woke up after 7am?

Calculate the size of angle y.

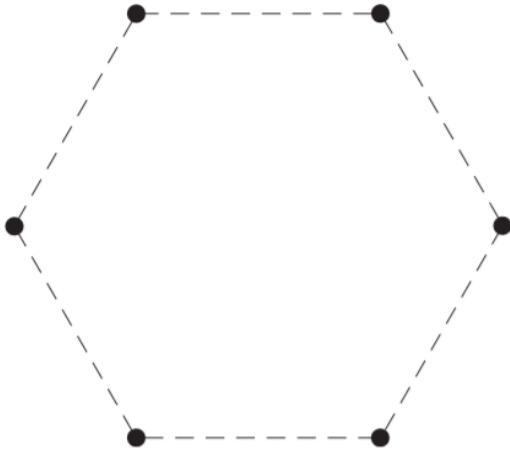This chart shows the amount of money spent in a toy shop in three months.

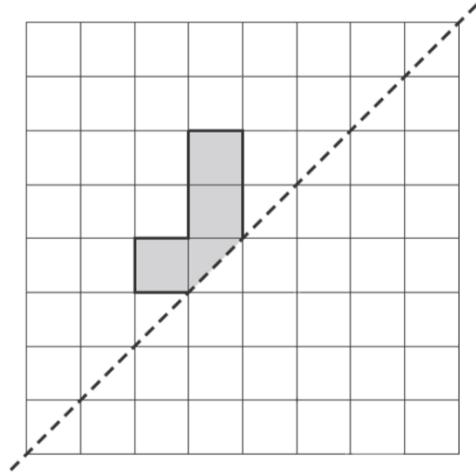How much more money was spent in the shop in December than in November?

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Here is a regular hexagon.
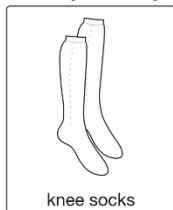**Join three of the dots to make an equilateral triangle.**

Here is a shaded shape on a square grid.
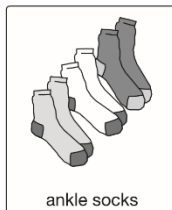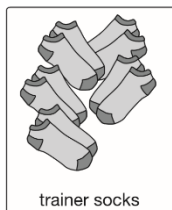**Draw the reflection of the shape in the mirror line.**

mirror line

A shop sells pairs of socks.

knee socks   ankle socks   trainer socks

1 pair for £5.45   **3 pairs** for £7.50   **5 pairs** for £8.50

Kirsty buys 1 pair of knee socks and 3 pairs of ankle socks.
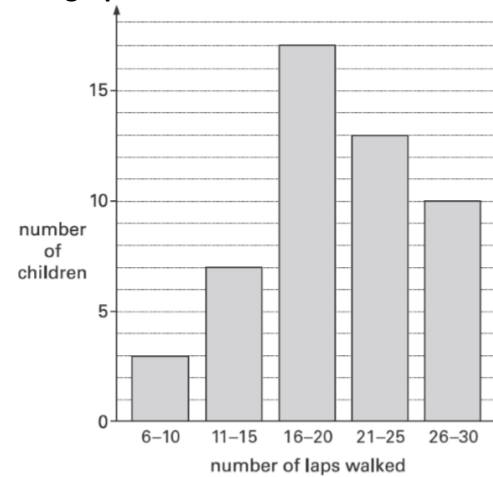**She pays with a £20 note.**
How much change does she get?

Amy spends £25.50 on trainer socks.
How many pairs of trainer socks does she get?
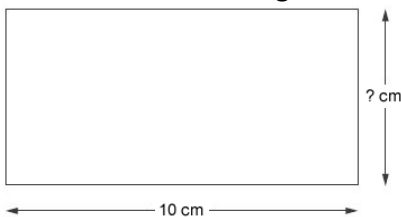
Some children do a sponsored walk.
The graph shows their results.
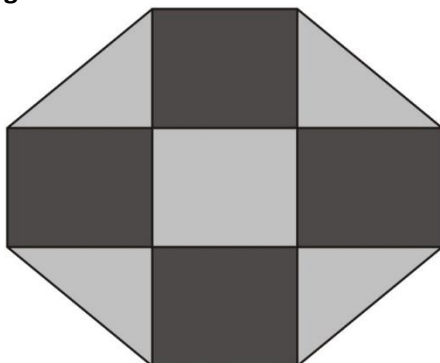

How many children walked 21 laps or more?

Ben's rectangle is 10 cm long.
It has a perimeter of 28 cm.
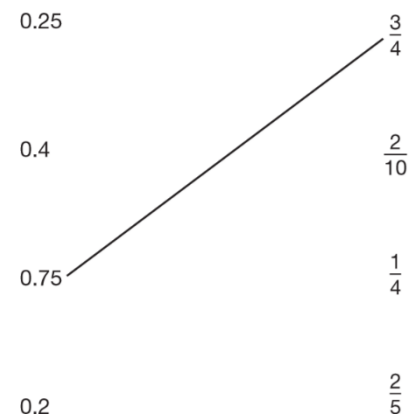**How wide is his rectangle?**

? cm

10 cm

John says, 'Every multiple of 5 ends in 5'
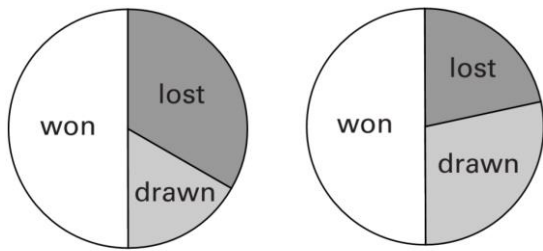**Is he correct? Explain how you know.**

This plan of a garden is made of rectangles and triangles. The area of each rectangle is 12 square metres. What is the area of the whole garden?

Match each decimal number to its equivalent fraction. One has been done for you.

0.25 $\frac{3}{4}$

0.4 $\frac{2}{10}$

0.75 $\frac{1}{4}$

0.2 $\frac{2}{5}$

The pie charts show the results of a school's netball and football matches.
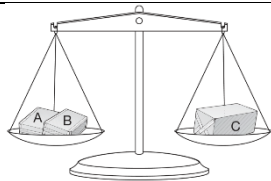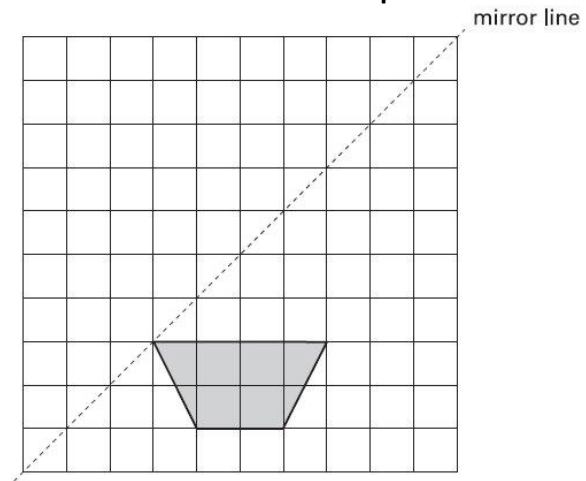

Netball   Football

The netball team played 30 games.
The football team played 24 games.

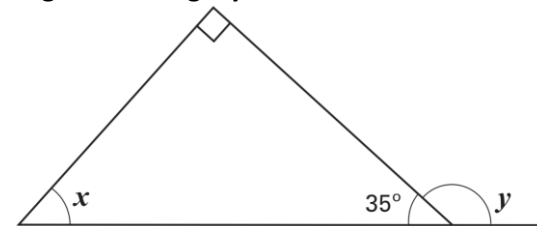Estimate the percentage of games that the netball team lost.

Draw the reflection of this shape.

mirror line

Amir has three parcels.
Parcels A and B together weigh the same as parcel C.
The three parcels weigh 800 grams altogether.
Parcel A weighs 250g.
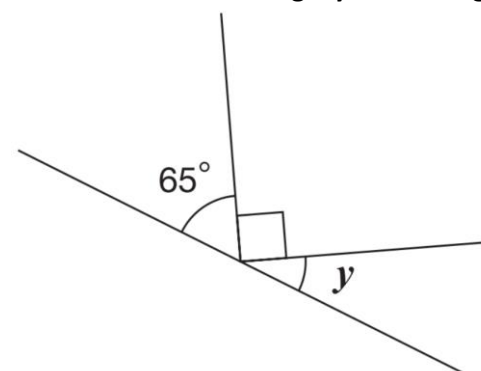How much does parcel B weigh?

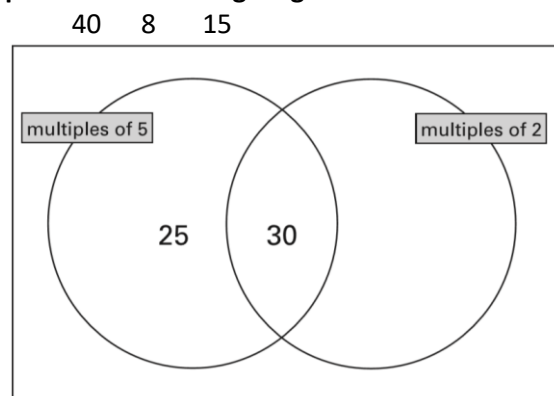Look at this diagram. Calculate the size of angle x and angle y.

x 35° y

Match each percentage to its correct decimal equivalent.

2%		0.2
		0.06
		0.62
62%		0.02
		0.062
60%		0.6

Calculate the size of angle y in this diagram.

65°

y

Write each of these numbers in its correct place on the sorting diagram.

40   8   15

multiples of 5   multiples of 2

25   30

These two shaded triangles are each inside a regular hexagon.
Under each hexagon, tick the correct name of the shaded triangle.
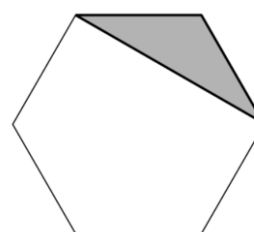
equilateral   equilateral
isosceles   isosceles
scalene   scalene

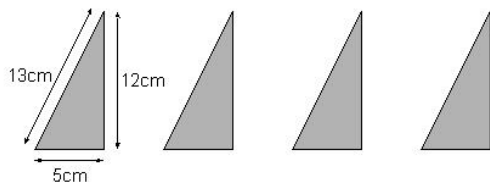
Write the two other prime numbers that multiply to make 165

5   × ☐ × ☐ =   165

Circle all the numbers that are one more than a multiple of 4

11   17   25   34   40   49
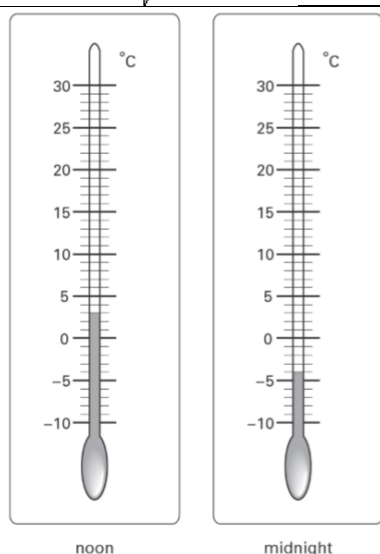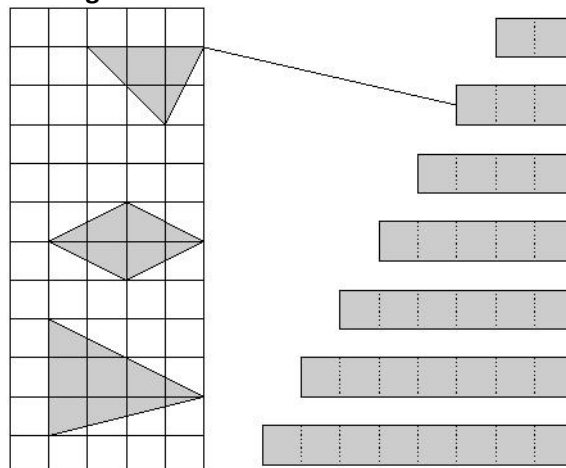
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**Lindy has 4 triangles, all the same size.**

13cm 12cm 5cm

She uses them to make a star. Calculate the perimeter of the star.

Draw one line from each shape to the rectangle which has the same area.

These are the temperatures at noon and midnight on a day in winter. How many degrees higher is the temperature at noon than at midnight?

noon   midnight

Conversion graph: Kilometres-Miles
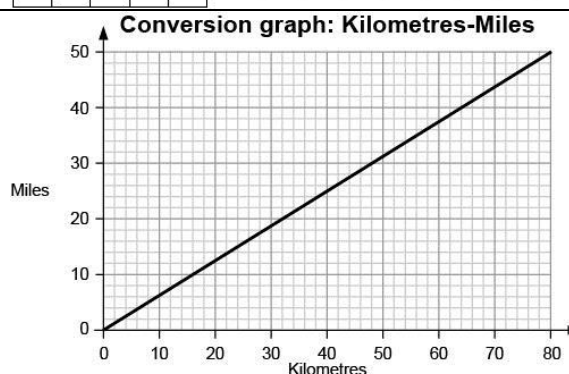
Use the graph to work out how many miles are equal to 20 km.

Use the graph to work out how many kilometres are equal to 40 miles.

The numbers in this sequence increase by 3 each time.
  3 6 9 12 . . .
The numbers in this sequence increase by 5 each time.
  5 10 15 20 . . .
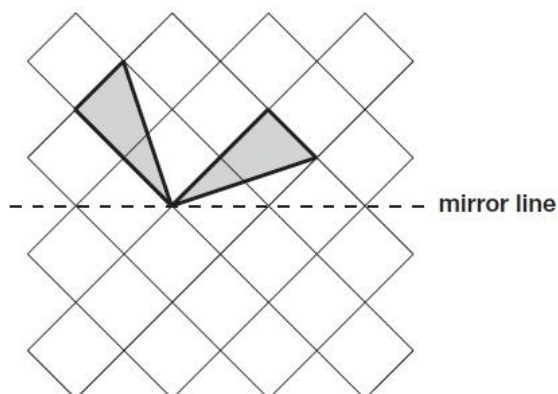**Both sequences continue.**
Write a number greater than 100 which will be in both sequences.
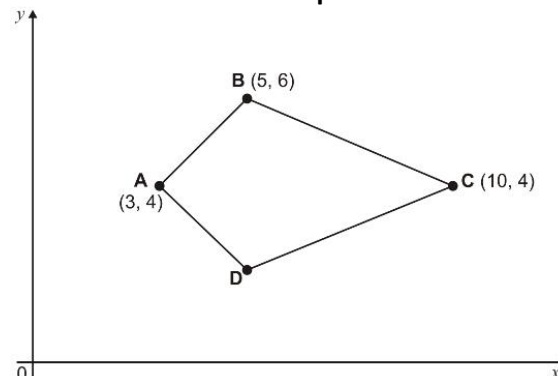
A square always has four sides.
Is it true that a four-sided shape is always a square? Explain how you know.

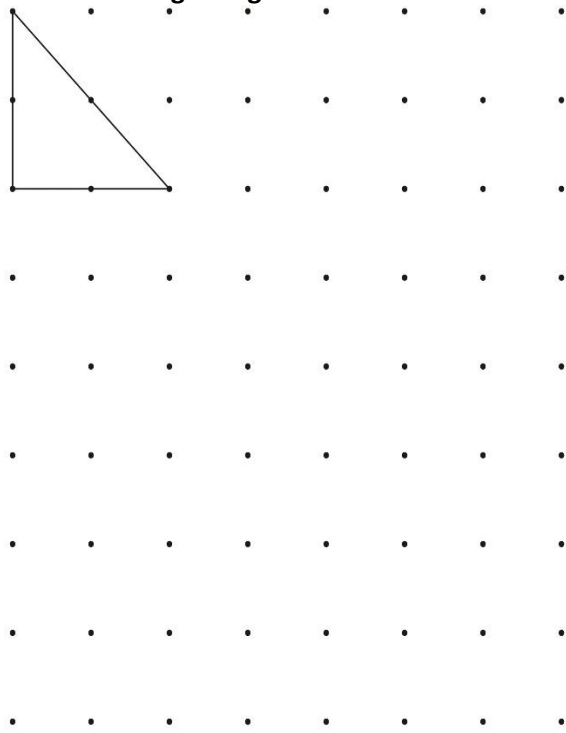**Complete this shape so that it is symmetrical about the mirror line.**

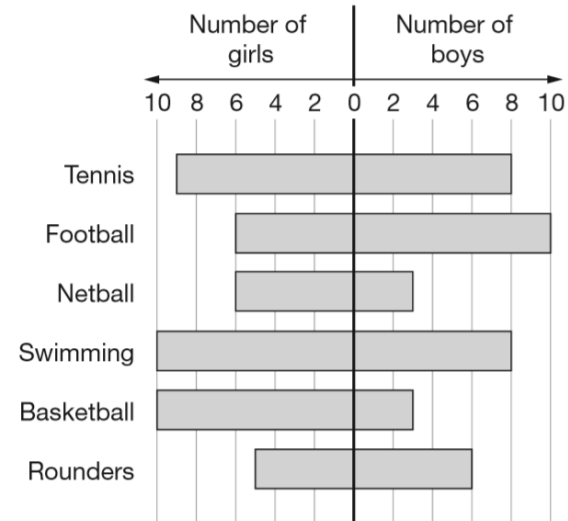mirror line

Here is a kite.
Write the coordinates of point D.

B (5, 6)

A (3, 4)

C (10, 4)

D

Use the dots to draw one different shape which has a right angle.

Some children each chose their favourite sport. This chart shows the results.

Number of girls | Number of boys

10 8 6 4 2 0 2 4 6 8 10

Tennis
Football
Netball
Swimming
Basketball
Rounders

Which sport was chosen by the most children?

How many more girls than boys chose basketball?

Write all the sports that were chosen by more boys than girls.

Look at this number.
6 9 7, 4 3 2
What is the value of the digit 6 in the number?
Circle the correct answer.
   six thousand
   six hundred thousand
   sixty thousand
   six million

Emily, Ben and Nisha take part in a sponsored swim to collect money for charity.
Emily collects £2.75 more than Nisha.
Ben collects £15
Nisha collects £7 less than Ben.
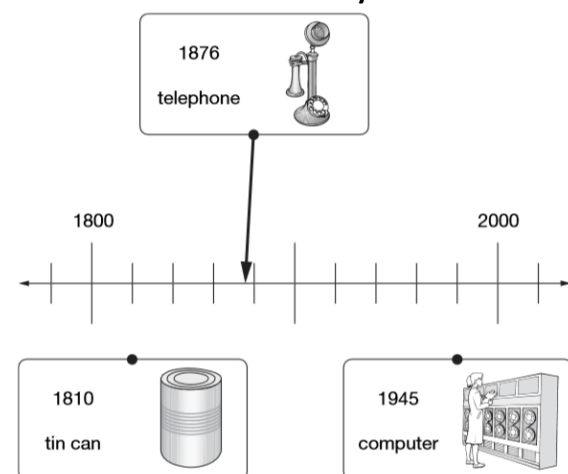**Altogether how much money do the three children collect?**

Hassan scores 40 out of 80 in a test.
Kate scores 40% in the same test.
Who has the higher score?
Explain how you know.

Here is part of a time line. Draw a line from each invention to the correct point on the time line. One has been done for you.

1876
telephone

1800   2000

1810
tin can

1945
computer

Circle two different numbers which multiply together to make 1 million.

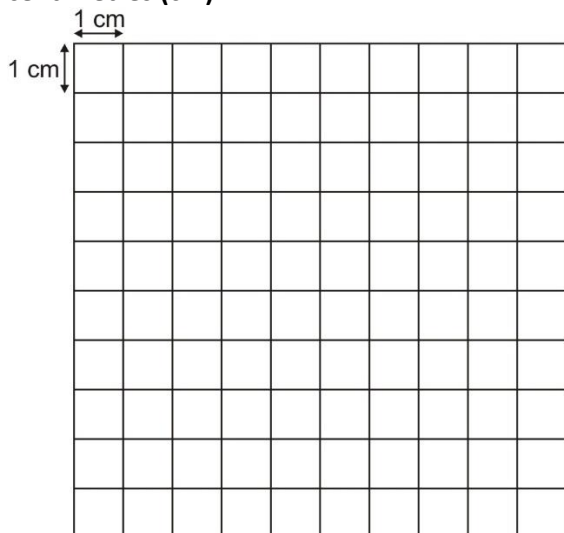10   100   1000   10000   100000

Car Boot Sale Entrance Fee:
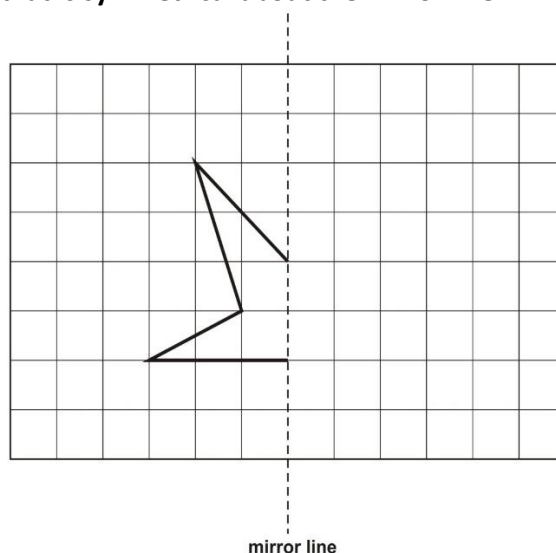Adults 50p   Children 30p
100 adults and 80 children pay to go in.
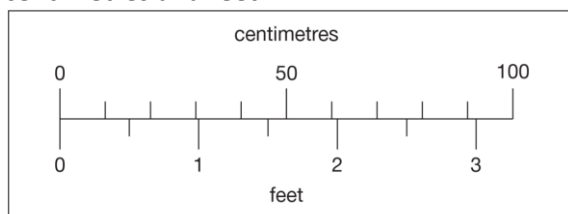**How much money do they pay altogether?**

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Draw a rectangle whose perimeter is 18 centimetres (cm).

1 cm →

1 cm ↕

Complete the diagram below to make a shape that is symmetrical about the mirror line.

mirror line

This scale shows length measurements in centimetres and feet.

centimetres

0   50   100

0   1   2   3

feet

Estimate the number of centimetres that are equal to 2½ feet.

Estimate the difference in centimetres between 50cm and 1½ feet.

Here are four digit cards.

7   5   2   1

Choose two cards each time to make the following two-digit numbers.
The first one is done for you.

an even number **52**

a multiple of 9

a square number

a factor of 96

$\frac{3}{10}$

$\frac{3}{5}$

$\frac{3}{100}$

$\frac{3}{50}$

0.03

0.06

0.3

0.6

Join each fraction to the correct decimal card. The first one has been done for you.

Amir and Lara buy some fruit.
grapes - £2.50 for 1 kilogram
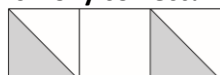peaches - £1.99 for a box
pineapples - £1.40 each
Amir buys 2 pineapples and a box of peaches.
How much does he pay?

Lara buys half a kilogram of grapes and one pineapple.
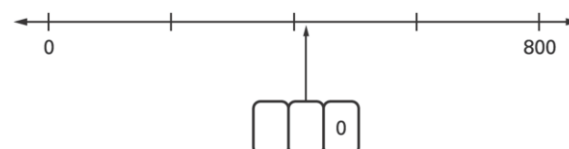**How much change does she get from £5?**

Holly says, 'One-third of this shape is shaded.'
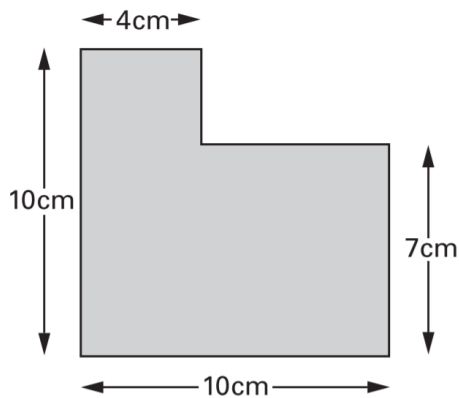**Is Holly correct? Explain how you know.**

Here are four digit cards.

2   9   4   7

Use two of the four cards to make the number on the number line.

0   800

☐☐ 0

24

What is the area of this shape?

4cm
10cm
7cm
10cm

1 and 48 is factor pair of 48
Find three other factor pairs of 48

☐ and ☐

☐ and ☐

☐ and ☐

Write each word in the correct box.
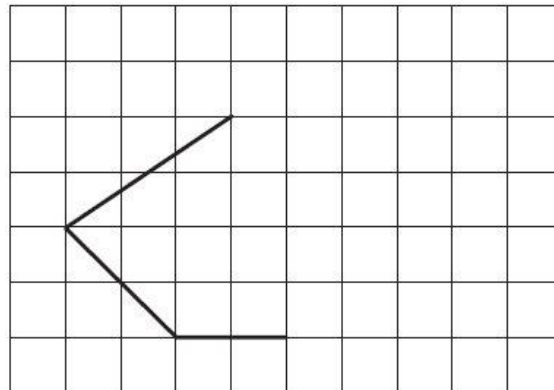
faces   edges   vertices
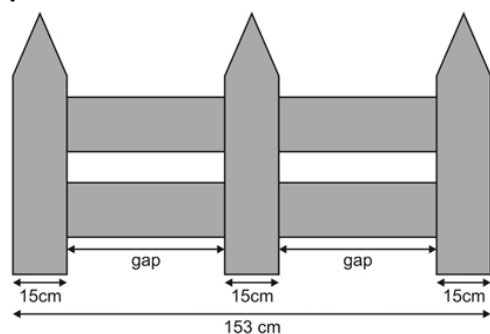
A cube has
6 ☐
8 ☐
12 ☐

Draw two more lines to make a shape which has a line of symmetry.

This fence has three posts, equally spaced.
Each post is 15 centimetres wide. The length of the fence is 153 centimetres.
Calculate the length of one gap between two posts.

gap   gap
15cm   15cm   15cm
153 cm

Here is a sorting diagram with four sections, A, B, C and D.

	multiple of 10	not a multiple of 10
multiple of 20	A	B
not a multiple of 20	C	D

Write a number that could go in section C.

Section B can never have any numbers in it. Explain why.

Liam thinks of a number.
He multiplies the number by 5 and then subtracts 60 from the result.
His answer equals the number he started with.
What was the number Liam started with?

In a country dance there are 3 boys and 2 girls in every line.
42 boys take part in the dance.
How many girls take part?

---

n and *p* stand for two numbers.

$$\frac{n}{p} = \frac{2}{3}$$

n is a multiple of 5
p is a multiple of 6
Find numbers that *n* and *p* stand for.

Put these masses in order, starting with the heaviest.

800 g   ½ kg   1 kg   60 g

☐ ☐ ☐ ☐

heaviest

Write the two missing digits in this multiplication.

☐ 9 × ☐ 9 = 2001

Circle the number that is equal to $\frac{70}{1000}$

0.70   0.007   0.07   0.7

Here is a part of a train timetable.

Edinburgh	–	09:35	–	–	13:35	–	–
Glasgow	09:15	–	11:15	13:15	–	13:45	15:15
Stirling	09:57	–	11:57	13:57	–	14:29	15:57
Perth	10:34	10:51	12:34	14:34	14:50	15:15	16:35
Inverness	–	13:10	–	–	17:05	–	–

How long does the first train from Edinburgh take to travel to Inverness?

Ellen is at Glasgow station at 1:30pm. She wants to travel to Perth. She catches the next train. At what time will she arrive in Perth?

Look at each of these diagrams. On each one, put a tick if it is the net of a square based pyramid. Put a cross if it is not.
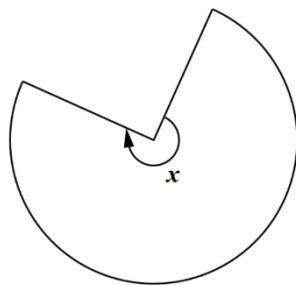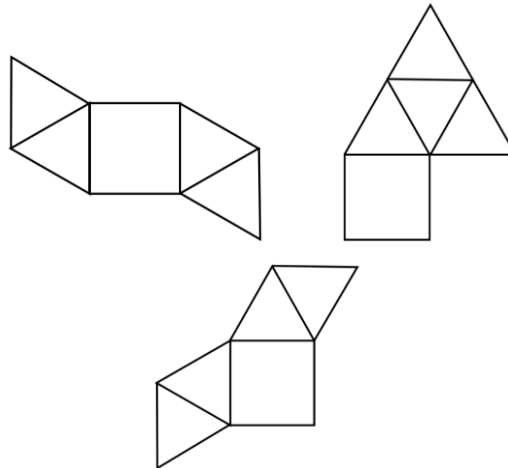
This shape is three-quarters of a circle. How many degrees is angle x?

Complete the table.

shape	property of shape		
	4 sides only	one or more right angles	two pairs of parallel sides
◺	✗	✓	✗
▪	☐	☐	☐
◤	☐	☐	☐

Look at these numbers written in Roman numerals. One is not written correctly. Put a cross on it.
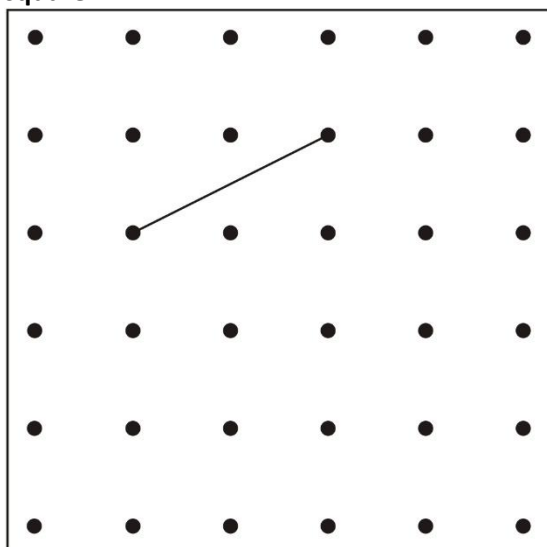
MMCM   MCMM   MMMC
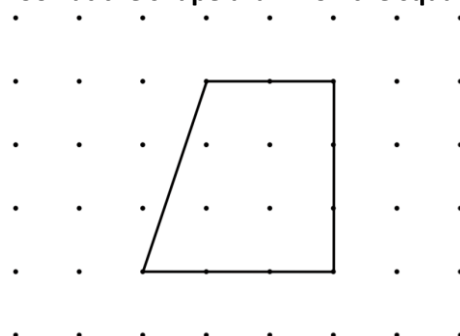
MMCC   MCCC

A shop sells fruit.
- **Chen buys 2 apples and 3 bananas. He pays £2.35**
- **Megan buys 2 apples and 1 banana. She pays £1.25**

How much does one banana cost?

The line on the grid is one side of a square. On the grid, draw the other three sides of the square.

Look at the shape drawn on the square grid.

For each of the four sentences below, put a tick if it is true. Put a cross if it is not true.

1) The shape has exactly 2 right angles.

2) The shape has 2 pairs of parallel lines.

3) The shape has one line of symmetry.

4) The shape is a quadrilateral.

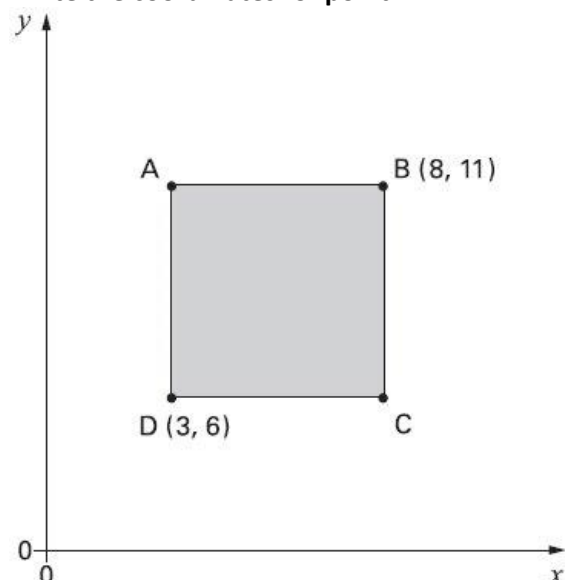**Circle the two prime numbers.**

29   39   49   59   69

Circle the fractions that are equal to 60%

$\frac{6}{20}$ $\frac{1}{60}$ $\frac{3}{5}$ $\frac{6}{10}$ $\frac{6}{60}$ $\frac{36}{60}$

Here is a shaded square.
Write the coordinates for point A.

A

B (8, 11)

D (3, 6)

C

This table shows the number of things to eat in five children's lunch boxes.

	sandwiches	apples	bananas	fruit bars
Lisa	1	2	0	2
Jack	2	0	2	1
Kemi	1	1	0	2
Nik	1	2	1	0
Ben	2	1	2	1

Here is a graph of the information for four of the children. Which child's information is missing from the graph?

Number of things to eat

sandwiches   apples   bananas   fruit bars
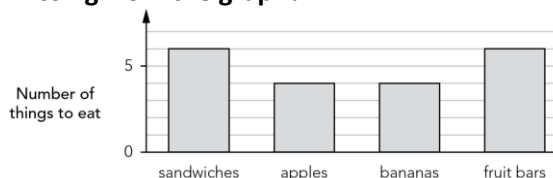
A rectangle has an area of 100 cm².
How long could the sides of the rectangle be?
Give three different examples, using whole numbers.

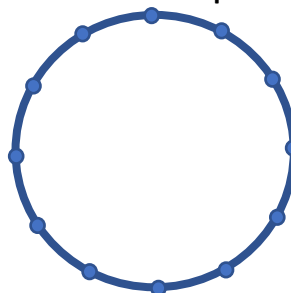Complete the missing numbers to make the calculations correct.

$$\frac{3}{10} + \frac{3}{1000} = \frac{\boxed{}}{1000}$$

$$\frac{7}{10} + \frac{7}{1000} = \boxed{0.}$$

Here is a quadrilateral drawn on a square grid. On the same grid, draw a different quadrilateral that has the same area.
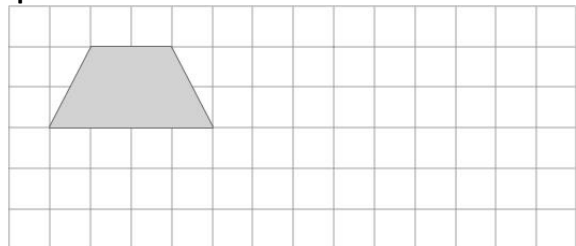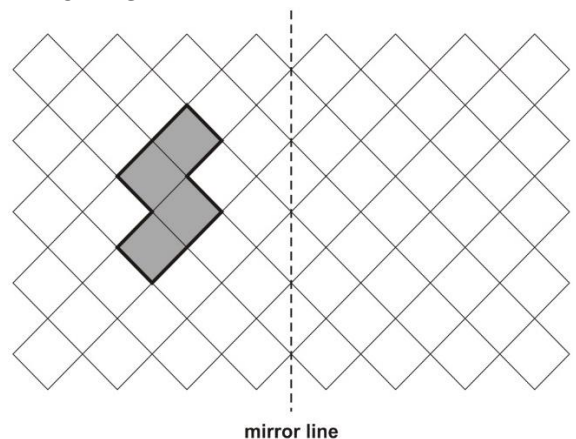

Join 3 points to make an equilateral triangle.

An iced cake costs 10p more than a plain cake.
Sarah bought two of each cake.
They cost £1 altogether.
What is the cost of an _iced_ cake?

Mina thinks of a 3-D shape.
She says, 'It has 5 faces. Two opposite faces are triangles. The other faces are rectangles.'
What is the name of the 3-D shape?

Draw the reflection of the shaded shape in the mirror line.

mirror line

Some children take part in the long jump.
The graph shows the distances the children jumped.

Lucy
Ben
Joel
Nicola
Tara

0 20 40 60 80 100 120 140 160 180 200 220 240 260
distance jumped (cm)
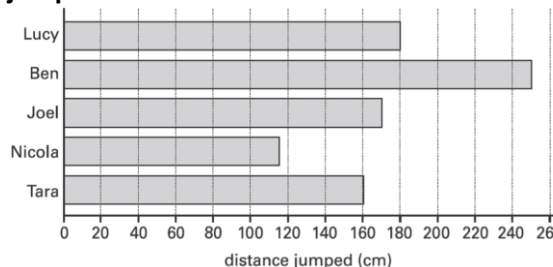
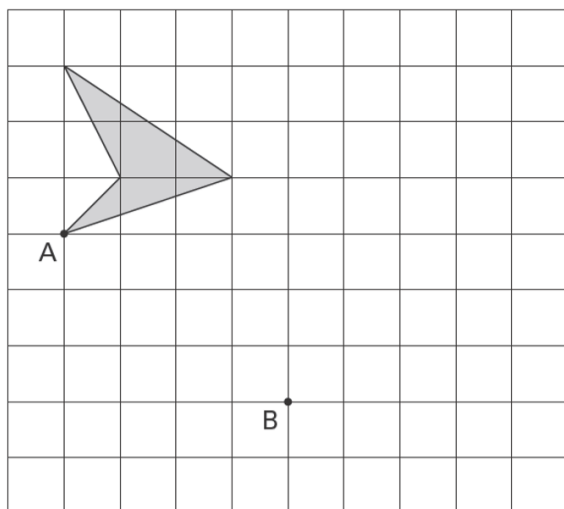Estimate how much further Lucy jumped than Nicola.
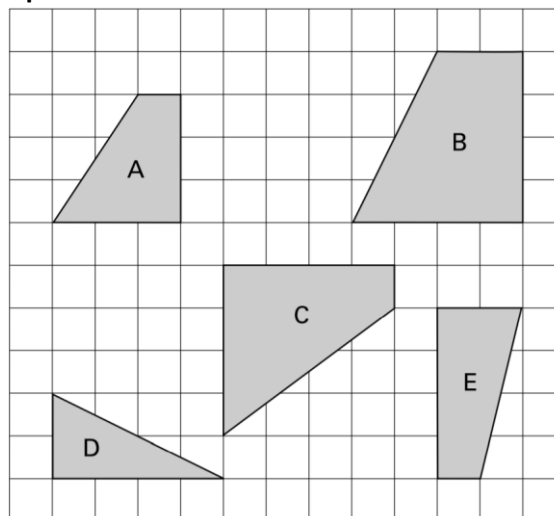
Write in the missing number.

$$8.5 + 14.7 = 10.2 + \boxed{}$$

How many halves are there in 15?

Here is a shaded shape on a square grid. Rehsma translates the shape from point A to point B. Draw the new position of the shape after the translation.

Here are five shapes on a square grid. Which two shapes fit together to make a square?

The numbers in this sequence increase by the same amount each time. Write in the missing numbers.

1			13

October has 31 days. On October 24ᵗʰ, Zak says, 'My birthday is exactly two weeks from now.' Write the date of Zak's birthday.

A bottle holds 1 litre of lemonade. Rachel fills 5 glasses with lemonade. She puts 150 millilitres in each glass. How much lemonade is left in the bottle?

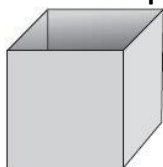**Complete this three-digit number so that it is a multiple of 9**

2		

Write one number in each place in the sorting diagram.
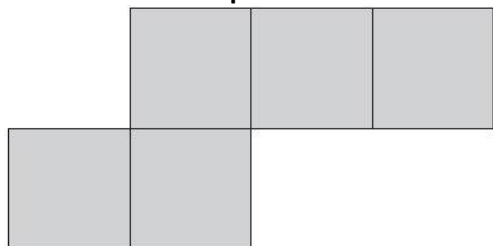
is a multiple of 5	is **not** a multiple of 5

Five children shared 4 packs of sweets equally. What fraction of a packet did they each receive?
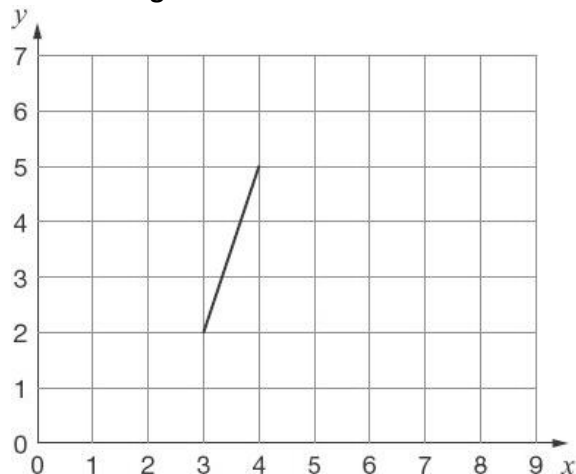
Here is an open top cube.

Here is the net from which it is made. Put a tick on the square which is its base.

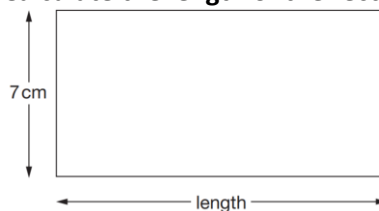**Here is one side of a square drawn on a coordinate grid.**

The square has a vertex at (6, 1). Draw the other three sides of the square on the grid.

Write the three missing numbers in the empty boxes.

+10,000	+10 →		
	45,170	45,180	45,190
	55,170		
	65,170		

The perimeter of this rectangle is 50 centimetres.
Calculate the length of the rectangle.

7 cm

length

Circle two numbers which have a difference of 2

−1   − 0.5   0   0.5   1   1.5

Circle the two decimals which are closest in value to each other.

0.9   0.09   0.99   0.1   0.01

Write a cross on the numbers that are not square numbers.

1^3 2^3 3^3 4^3 5^3

Guide books cost £1.50 each. The waxworks sells £24 worth of guide books. How many guide books is this?

Write the correct whole number in the box.

5 miles is approximately _____ kilometres.

Put a ring around all the square numbers.

4   7   24   25   36   40

A school buys some yo-yos as prizes.
The yo-yos cost £4.25 each.
The school has £40 to spend on prizes.
They buy as many yo-yos as they can.
How much money is left?

Seb had some cherries.
Every day he ate 10 cherries and gave 5 away.
After he gave the last 5 cherries away, he had eaten 40 cherries altogether.
How many cherries did Seb have at the start?

Three _different_ numbers add up to 40
The numbers are all even.
Each number is less than 20
Write what the three _different_ numbers could be.

☐ + ☐ + ☐ = 40

A piece of cheese has a mass of 350 grams.
Mark an arrow on the scale to show the reading for 350 g.

0   500g   1 kg   1500 g   2 kg

Draw one line from each calculation on the left to the correct box on the right. One has been done for you.
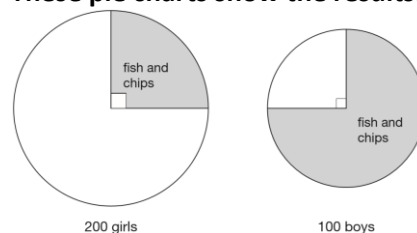
11 × 11

4 × 5 × 6

56 + 27 + 17

835 – 745

4000 ÷ 50

greater than 100

less than 100

equal to 100

200 girls and 100 boys were asked about their favourite meal.
These pie charts show the results.

fish and chips

fish and chips

200 girls   100 boys

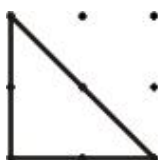**For each statement put a tick if it is true.**

Three-quarters of the boys chose fish and chips.

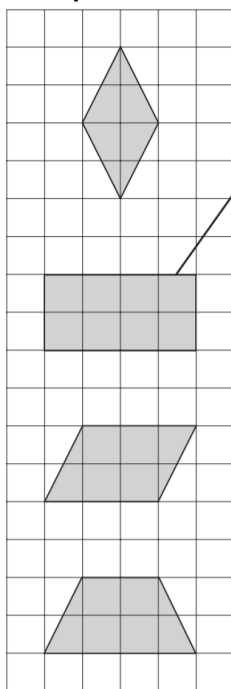Three times as many boys as girls chose fish and chips.

Altogether, half of the children chose fish and chips.

25 more boys than girls chose fish and chips.

Join the dots to make 4 different triangles.
One has been done for you.

29

Match each quadrilateral to the correct description. One has been done for you.
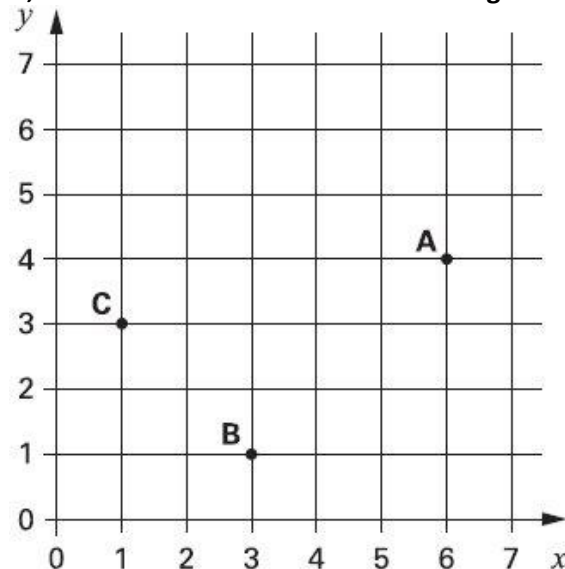
2 pairs of sides equal in length.
4 right angles.

Only 1 pair of parallel sides.

Opposite sides are parallel.
It has no lines of symmetry.

4 sides of equal length.
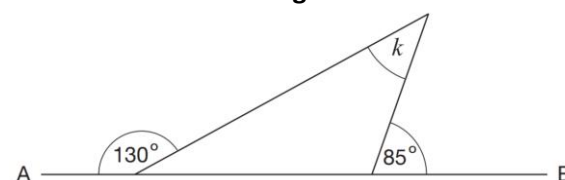Opposite angles are equal.

A, B and C are three corners of a rectangle.

What are the coordinates of the fourth corner?

14,890 festival tickets were sold before the event.
Another 6,752 were sold on the day.
546 people did not arrive at the festival.
How many people were at the festival altogether?

Look at the diagram. AB is a straight line.
Work out the size of angle k.

k

130°   85°

A   B

Kate and Jamie each have some money.
Altogether they have £1.50
Kate gives Jamie 10p so that they both have the same amount.
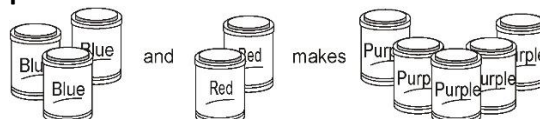**How much money did each have at the start?**

Kate had [   ] p

Jamie had [   ] p

Purple paint is made by mixing blue and red paint.

Blu Blue and Red makes Pur rple Purp Purple urple

Use the picture to work out the missing numbers.

For 25 tins of purple paint you need _____ tins of blue pain and _____ tins of red paint.

Hayley makes a sequence of numbers.
Her rule is: 'find half the last number then add 10'
Write in the next two numbers in her sequence.

36   28   24   [   ]   [   ]

The table shows information about three solid shapes. Complete the table.

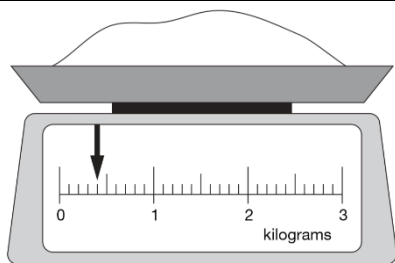|	number of faces	number of vertices
cube	6	
triangular prism		
square-based pyramid		

The numbers in this sequence increase by 30 each time.
  20   50   80   110 …
The sequence continues in the same way.
Which number in the sequence will be closest to 300?
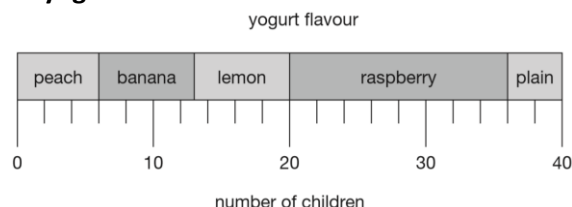
Explain why 16 is a square number.

Here is some flour on a weighing scale.
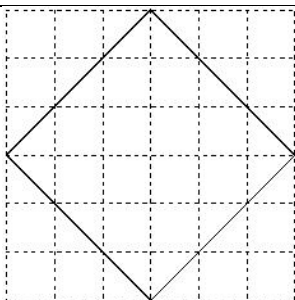
How many grams of flour are on the scale?

How much more flour must be added to the scale to make 1.6kg?

40 children each chose their favourite flavour of yogurt. This chart shows the results.

How many children chose lemon yogurt?

How many more children chose raspberry than plain yogurt?

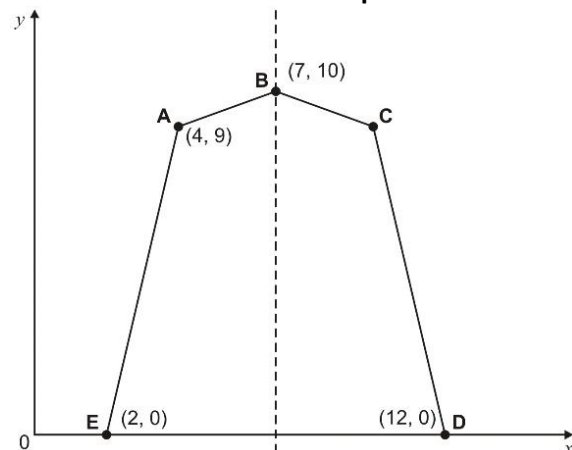Fill in the gaps in the sentences below.

The shape has _____ right angles.
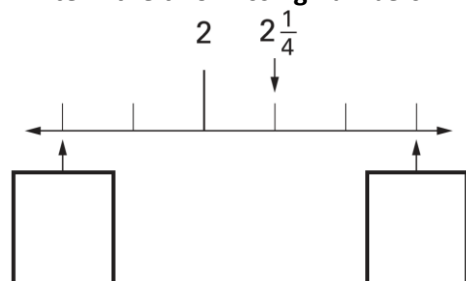
It has _____ straight sides.

It has _____ pairs of parallel lines.

_____ sides are the same length.

Here is a pentagon drawn on a coordinate grid. The pentagon is symmetrical.
What are the coordinates of point C?

Here is part of a number line.
Write in the two missing numbers.

$2 \qquad 2\frac{1}{4}$

102 people came to a car boot sale and paid 15p each to go in.
How much money was collected?

Each car had to pay £7 to be at the sale.
The school collected £399 from the cars.
How many cars were there?

Dev has a bag of 50p coins and Holly has a bag of 20p coins.
Both bags have the same amount of money in.
There are thirty 50p coins in Dev's bag.
How many 20p coins are there in Holly's bag?

Write the correct number shown by the arrow.

730 _____ 810
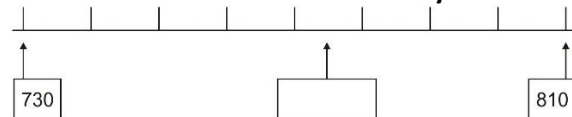
A box of crisps contains three different flavours.
prawn cocktail
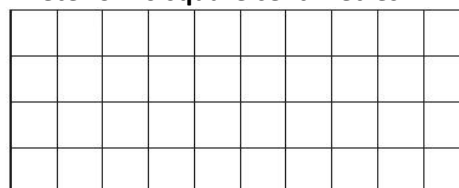cheese and onion
salt and vinegar
A quarter of the packets are prawn cocktail flavour.
30% are cheese and onion flavour.
What percentage are salt and vinegar flavour?

Here is a centimetre square grid.
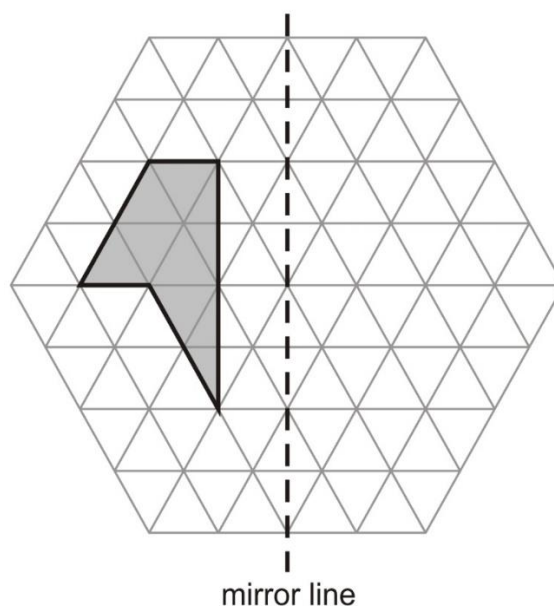On the grid draw a rectangle which has a perimeter of 10 square centimetres.

31

Here are six digit cards.

| 1 | 3 | 4 | 5 | 6 | 8 |

Choose two cards each time to make the following two-digit numbers. Use each digit card once.

a multiple of 5	☐ ☐
a square number	☐ ☐
a cube number	☐ ☐

Draw the reflection of the shaded shape in the mirror line.

mirror line

Write what the three missing digits could be in this calculation.

$$\boxed{} \times \boxed{} = \boxed{3\ 7\ 8}$$

A 3-D shape has 8 vertices.
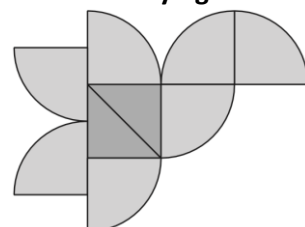**It has 6 faces.**
Each face is the same.
What is the correct name for this shape?

Joe has some triangular tiles and some quarter-circle tiles.
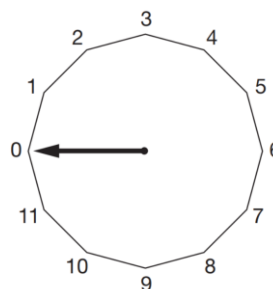

He uses 2 triangles and 7 quarter-circles to make this 'flying bird' design.

Joe makes some more of these 'flying bird' designs. He uses 56 quarter-circles.
How many triangles does he use?

This regular 12-sided shape has a number at each vertex.

Ben turns the pointer from zero, clockwise through 150°. Which number will the pointer now be at?

Nisha turns the pointer clockwise from number 2 to number 11. Through how many degrees does the pointer turn?

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30 children are going on a trip.
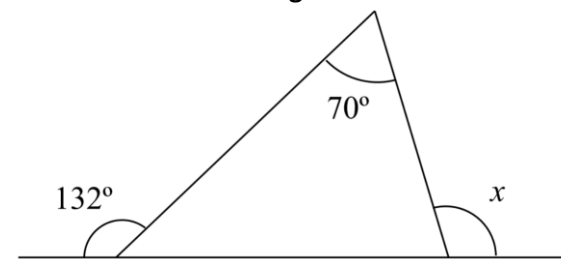**It costs £5 including lunch.**
Some children take their own packed lunch.
They pay only £3
The 30 children pay a total of £110
How many children are taking their own packed lunch?

Calculate the size of angle x.

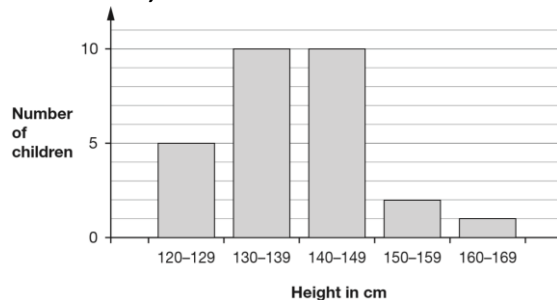**Write the missing numbers in the sequence.**

_____ 467,050   468,050   469,050 _____

Annie has collected 10p coins.
They are worth £10.
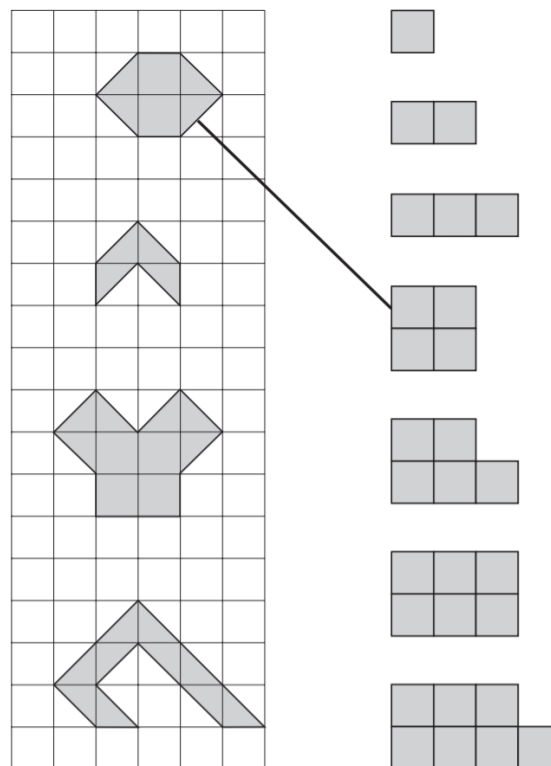**How many 10p coins does Annie have?**

The graph shows the heights of 28 children in Alfie's class, to the nearest centimetre.

Alfie is 153 cm tall. He says, 'Only one person in my class is taller than I am.'
Emma says, 'You can't tell this from the graph.' Explain why Emma is correct.

Match each shape on the left to one with equal area on the right.

Work out the missing numbers below. The first one is done for you.

The first [5] multiples of [4] add to 60

(because 4 + 8 + 12 + 16 + 20 = 60)

The first [3] multiples of [   ] add to 60

Now use different numbers to complete the sentence below.

The first [   ] multiples of [   ] add to 60

Debbie has a pack of cards numbered from 1 to 20
She picks four different number cards.
Exactly three of the four numbers are multiples of 5
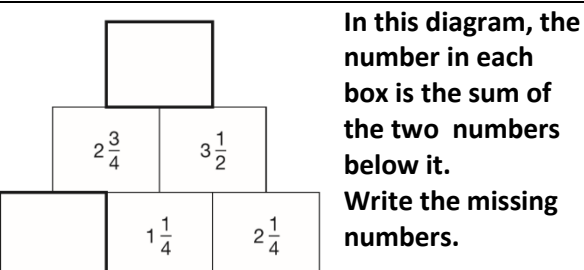Exactly three of the four numbers are even numbers.
All four of the numbers add up to less than 40
Write what the numbers could be.

Write what the three missing digits could be.

[   ][   ] × 3 = [8][   ]

Circle the number that is equal to $\frac{99}{1000}$

0.99   0.099   9.9   0.990   9.990

In this diagram, the number in each box is the sum of the two numbers below it.
Write the missing numbers.

$2\frac{3}{4}$ $3\frac{1}{2}$

$1\frac{1}{4}$ $2\frac{1}{4}$

Tickets for a school play cost £2.75 each.
Dev sold 23 tickets.
How much ticket money did Dev collect?

Holly collected £77 altogether from selling tickets.
How many tickets did she sell?

Complete this two digit number so that it is a multiple of 6.

[7][   ]

The perimeter of a rectangle is one metre.
Each longer side is 36 centimetres.
What is the length of each shorter side?
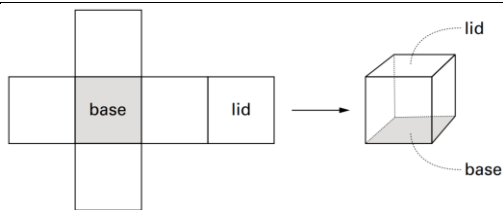
The diagram above shows a net that folds to make a box. There are two different nets shown below. Each net folds to make a box. The base of each box is labelled. For each box, label the face that will be the lid.
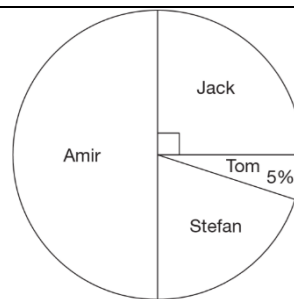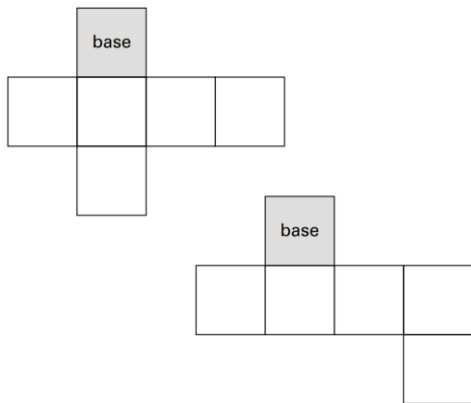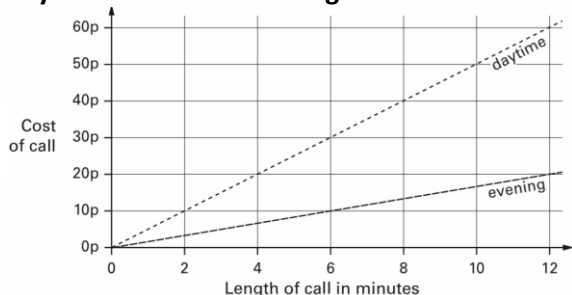
40 children predicted who would win the boys' race at sports day. This pie chart shows their predictions.

What percentage of the children predicted that Stefan would win?

10 children predicted the winner of the race correctly. Who won the race? Explain how you know.

This graph shows the cost of phone calls in the daytime and in the evening.

How much does it cost to make a 9 minute call in the daytime?

How much more does it cost to make a 6 minute call in the daytime than in the evening?

Write the correct sign < = or > in each box to make these sentences correct.

$\frac{3}{10}$ ☐ $\frac{5}{10}$

$\frac{1}{3}$ ☐ $\frac{1}{6}$

$\frac{2}{4}$ ☐ $\frac{1}{2}$

Circle two numbers with a difference of 8
−5 −4 −3 −2 −1 0 1 2 3 4 5

Emma saves £3.50 each week.
How much has she saved after 16 weeks?
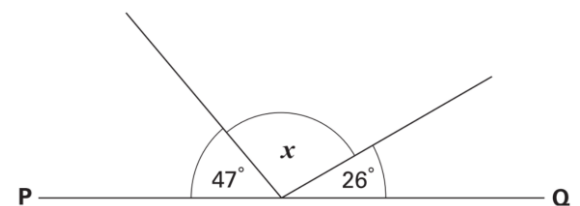
Halid makes a sequence of 5 numbers.
The first number is 2
The last number is 18
His rule is to add the same amount each time.
Write in the missing numbers.

2 ☐ ☐ ☐ 18
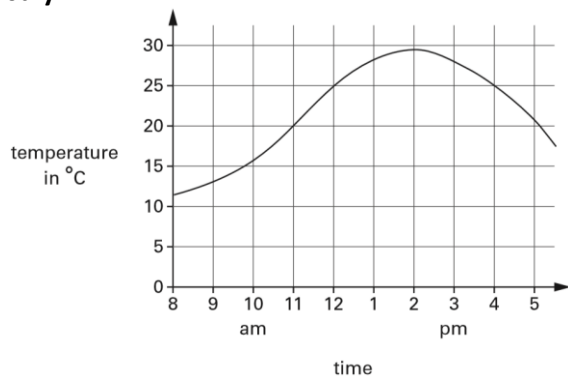
PQ is a straight line. Calculate the size of angle x.

What is the perimeter of a square with an area of 64 cm²?

Now give an example of a rectangle with an area of 64 cm² but a different perimeter.

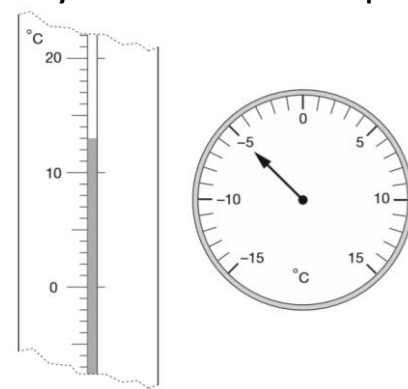Write all the numbers between 50 and 100 that are factors of 180

KeyStage2Maths.com

This graph shows the temperature on a day in July.
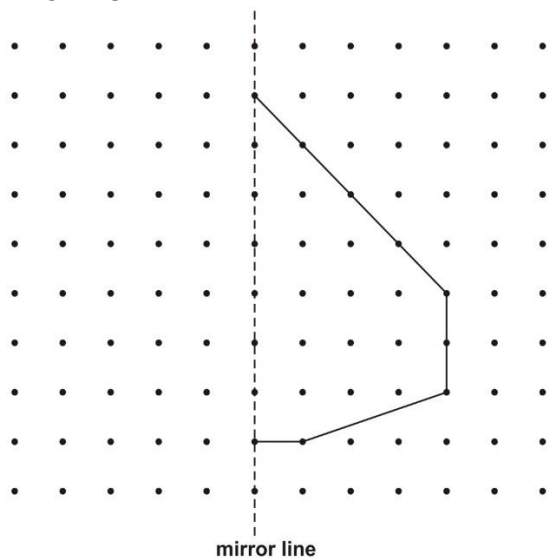

What is the temperature at 2pm?

For how many hours is the temperature above 25°C?

Here are two thermometers.
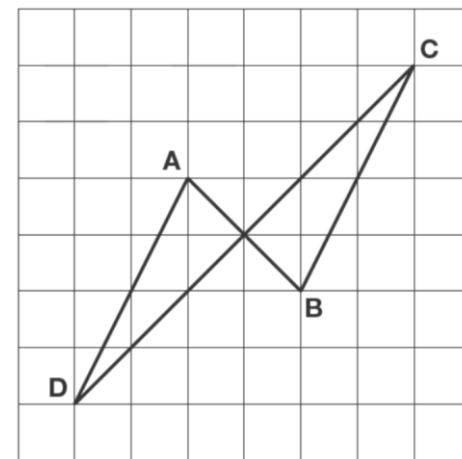**They show two different temperatures.**

What is the difference between the two temperatures?

Draw in the reflection of the shape in the mirror line.

mirror line

The diagram shows four lines drawn on a square grid. The lines are AB, BC, CD and DA.
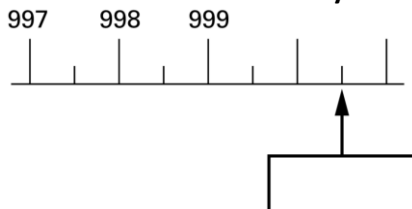

Which two of the lines are parallel?
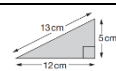
Which two of the lines are perpendicular?

Two 2-digit numbers multiply to make 176
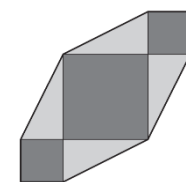**Write the two missing numbers.**

$$\boxed{} \times \boxed{} = 176$$

A shape has 4 right angles.
It has 4 sides which are not all the same length. Write the name of this shape.

Here is part of a number line.
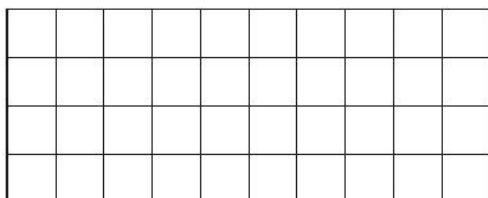**Write the number shown by the arrow.**

997   998   999

Chen has some right-angled triangular tiles.
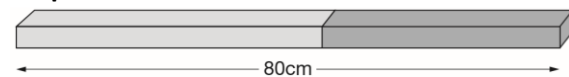
13cm 5cm 12cm

He makes this shape with four of his triangular tiles and three square tiles. What is the perimeter of Chen's shape?

Here is a centimetre square grid.
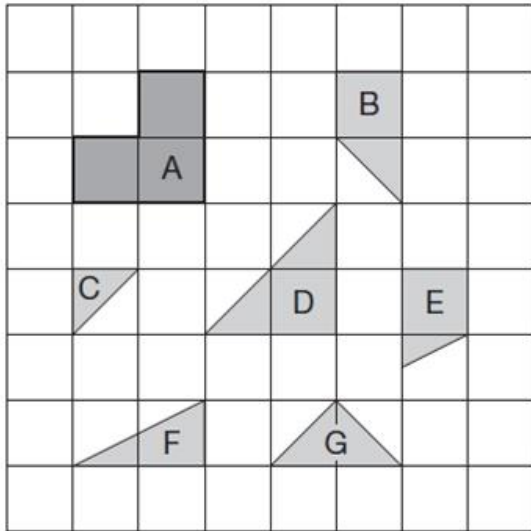**On the grid draw a shape which has a perimeter of 10 centimetres.**

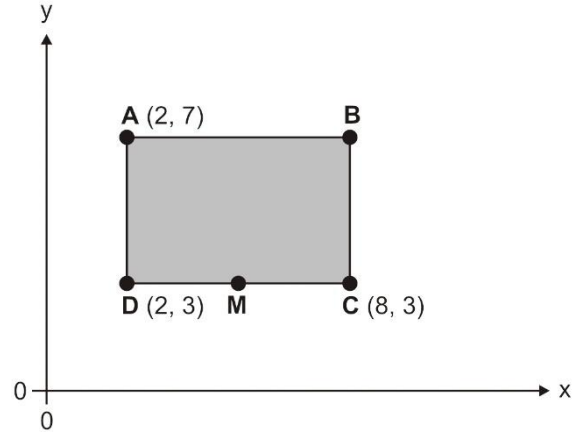**Alfie has two sticks.**
He puts them end to end.

80cm

One stick is 10cm longer than the other stick.
How long are the two sticks?

Here are some tiles on a square grid. Three different tiles can be fitted together without overlapping to make a shape identical to tile A. Write the letters of the three tiles.

Here is a shaded rectangle.


A (2, 7)   B
D (2, 3) M   C (8, 3)

What are the co-ordinates of B?

M is half way between D and C.
What are the co-ordinates of M?

Complete this table to show the numbers rounded to the nearest 100
One has been done for you.

	rounded to the nearest hundred
316	300
3162	
31628	
316281	

Here is a diagram for sorting numbers. Write these three numbers in the correct boxes.
You may not need to use all of the boxes.

9   17   20
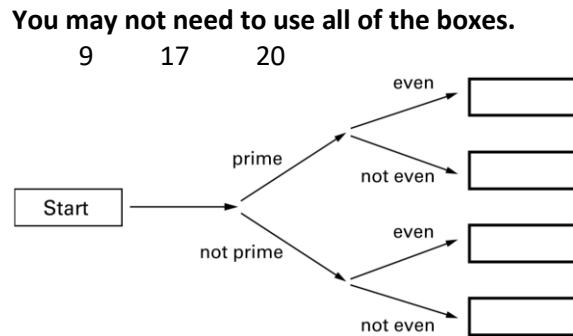
Write in the two missing digits.

☐ 0 × ☐ 0 = 3 0 0 0

Three-quarters of a number is 48
What is the number?

Write these fractions in order of size starting with the smallest.

$\frac{3}{4}$ $\frac{3}{5}$ $\frac{9}{10}$ $\frac{17}{20}$

☐ ☐ ☐ ☐

smallest
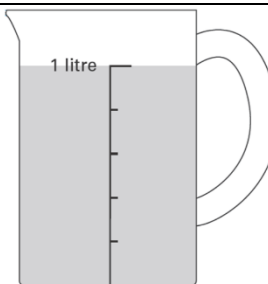
This jug has 1 litre of water in it.
Lauren pours out 400 millilitres of water.
Draw an arrow to show the new level of water in the jug.


1 litre

This statement is not true.
'A multiple of 10 added to a multiple of 10 always makes a multiple of 20'
Give an example to show that this statement is not true.

An isosceles triangle has a perimeter of 12cm.
One of its sides is 5cm.
What could the length of each of the other two sides be?
**Two different answers are possible.**
Give both answers.

KeyStage2Maths.com

Class 6 did a survey of mushrooms growing in a field. The diagram shows the distances of mushrooms from the centre of the field.

15m
10m
5m
×

× is the centre of the field
• is a mushroom
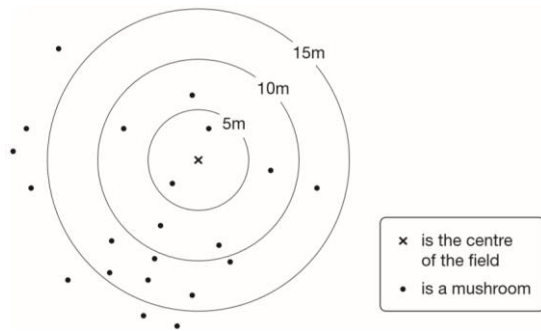
How many mushrooms were more than 10 metres from the centre?

What fraction of the mushrooms were less than 10 metres from the centre?

Here is a quadrilateral on a square grid. The quadrilateral is translated so that point A moves to point B. Draw the quadrilateral in its new position.

B

A
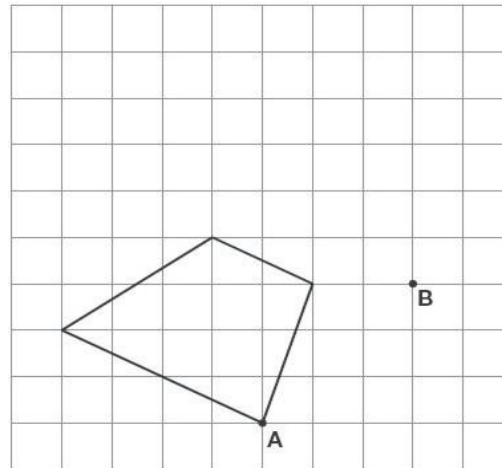
SALE
£1000 off every car

£30,999

A car usually costs £30,999
How much does it cost in the sale?

Tick each of the cards that shows more than a half.

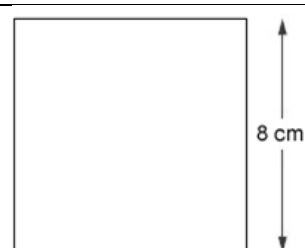$\frac{6}{8}$ 70%

37%   0.34 $\frac{3}{4}$

$\frac{3}{6}$ 0.55

Circle the numbers that are multiples of 4

14   24   34   44   54

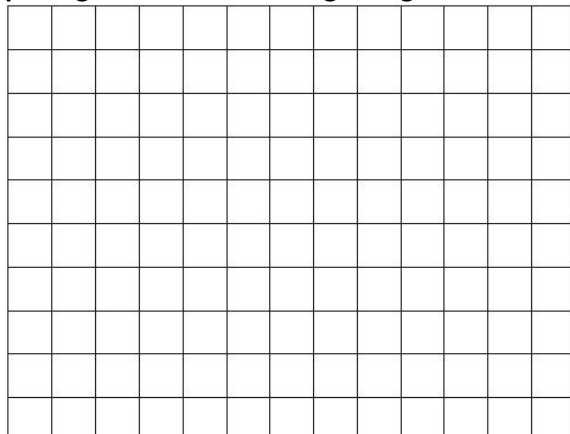**Write all the multiples of 3 that are greater than 10 and smaller than 20**

$\frac{2}{5}$ 2%

4%

$\frac{2}{50}$ 5%

20%

$\frac{5}{100}$ 40%

Match each fraction to its correct percentage equivalent.

8 cm

Calculate the perimeter of this square.

On the grid below, use a ruler to draw a pentagon that has three right angles.

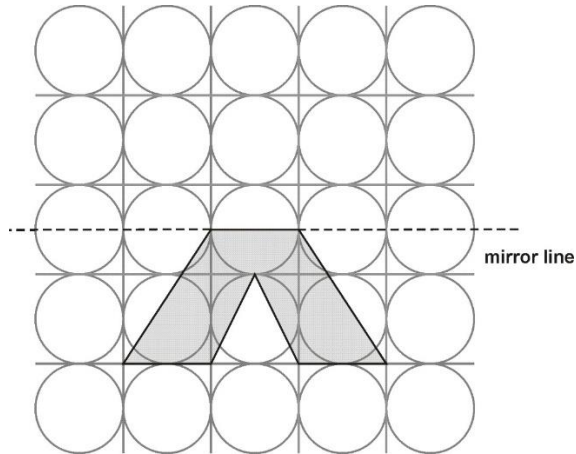**Tick the months that have 31 days.**

January ☐   July ☐

February ☐   August ☐

March ☐   September ☐

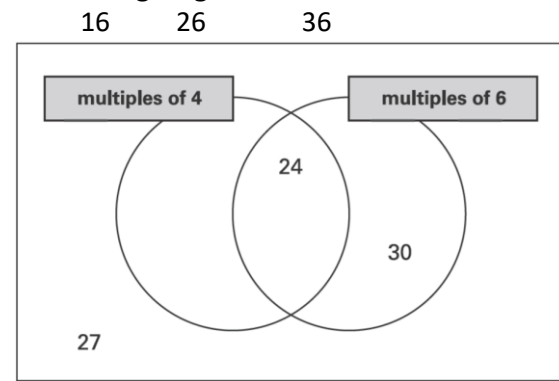April ☐   October ☐

May ☐   November ☐

June ☐   December ☐

Draw the reflection of the shaded shape in the mirror line.

mirror line

Write these numbers in the correct places on this sorting diagram.

16   26   36

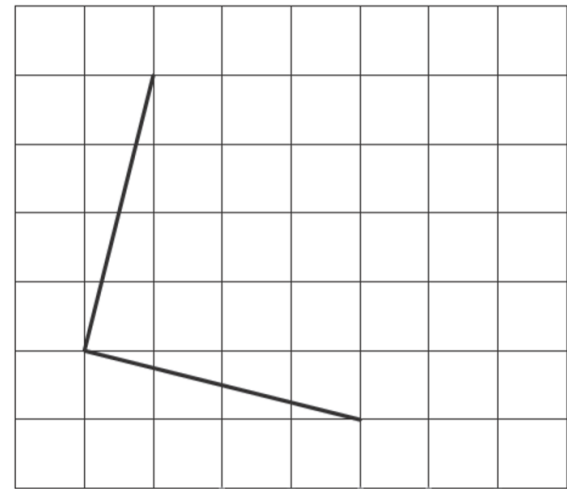multiples of 4   multiples of 6

24

30

27

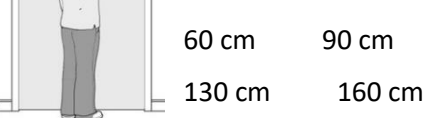**Match each fraction to its correct decimal equivalent.**

$\frac{1}{2}$

$\frac{1}{4}$

$\frac{3}{4}$

0.5

0.14

0.75

0.25

0.34

Draw two more lines on this grid to make a square.

Tom's bedroom door is about 190 cm tall.
Estimate Tom's height.
Draw a circle around the best estimate.

60 cm   90 cm

130 cm   160 cm

Here are four masses.

2 kilograms
1 tonne
800 grams
½ kilogram

Write the masses in order, starting with the lightest.

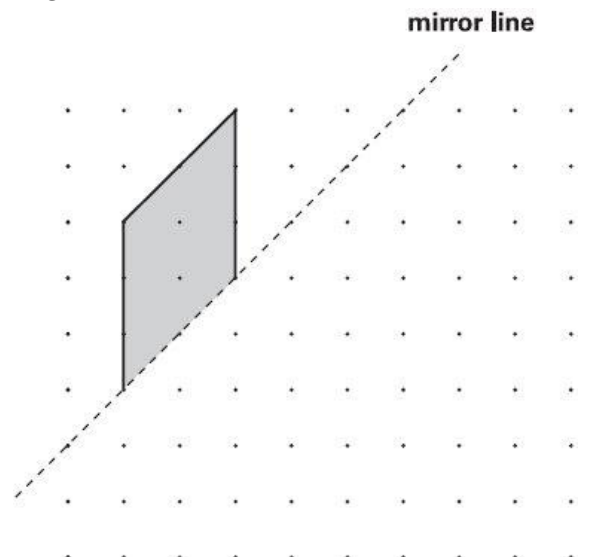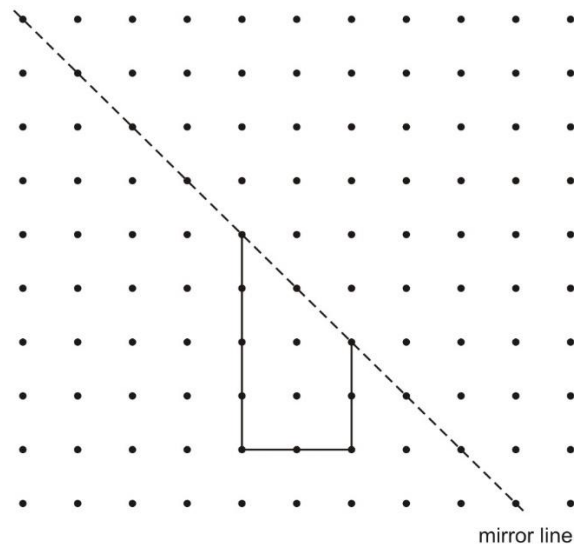|			

lightest

This is a drawing of a pentagonal prism. Tick the one shape that is a net for the pentagonal prism.

Draw the reflection of the shape in the mirror line.

mirror line

KeyStage2Maths.com
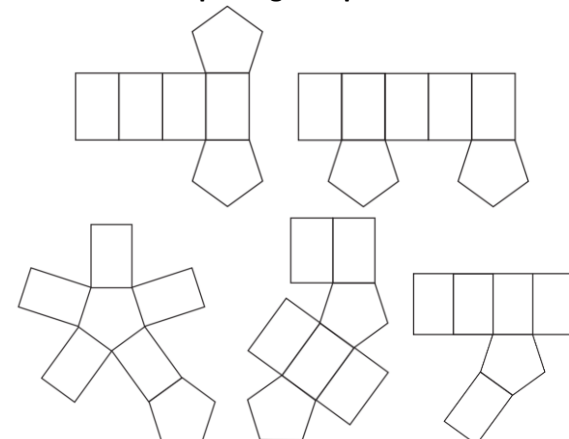
Use a ruler to draw the reflection of this shape in the mirror line.

mirror line

Draw two more circles on this grid to make a design that has a line of symmetry.
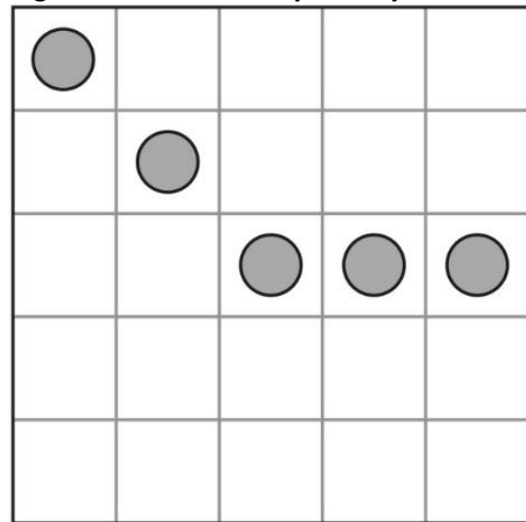
Tick the correct phrase to complete the sentence.
**A number that is not prime is called a _____**

prime factor
square number
composite number
common factor

A shop sells notebooks and pens.
Hassan bought a notebook and a pen. He paid £1.10
Kate bought a notebook and 2 pens. She paid £1.45
Calculate the cost of a notebook.

This is an open top box.

Put a tick for each diagram if it is a net for the box. Put a cross if it is not. The base is shaded in each one.
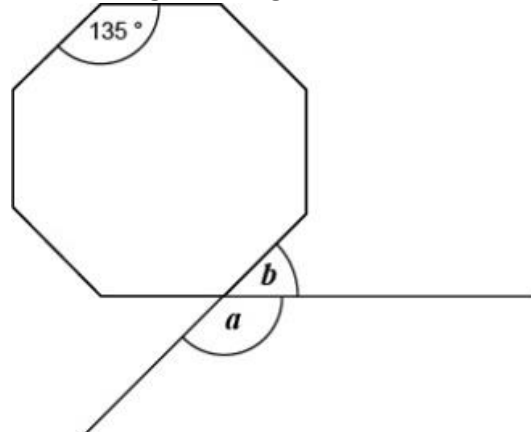
A   B   C   D
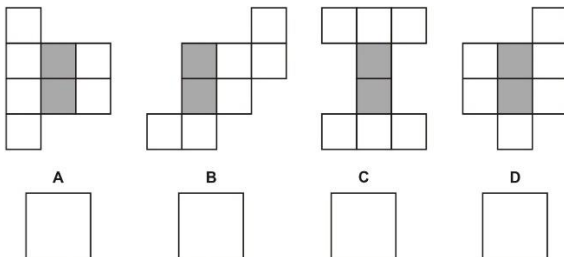
Write the three missing digits to make this subtraction correct.

$$\begin{array}{cccccc} 9 & 7 & \square & 4 & 2 \\ -1 & \square & 3 & 6 & \square \\ \hline 8 & 5 & 4 & 7 & 7 \end{array}$$

Match each fraction to the percentage which has the same value.
One has been done for you.

$\frac{1}{2}$ 100%

                    50%

$\frac{3}{4}$ 10%

$\frac{1}{10}$ 75%

                    30%

$\frac{10}{10}$ 40%

Here is a regular octagon.

135°

b
a

Calculate the sizes of angles a and b.
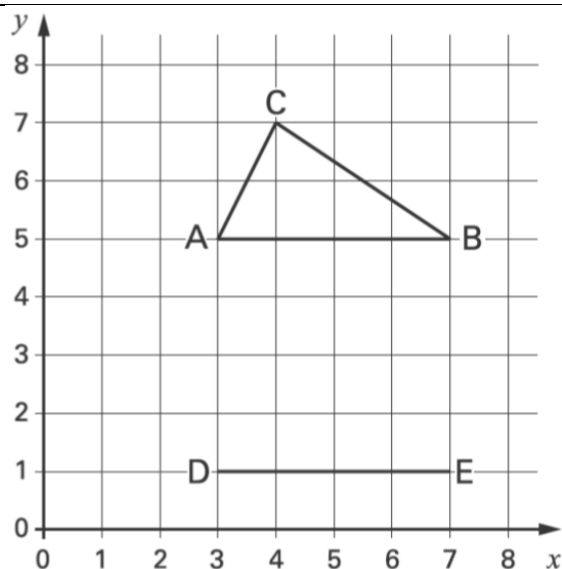
Write the missing numbers in the sequence.

_____ 273,001   283,001   293,001 _____

Circle two fractions that are equivalent to 0.6
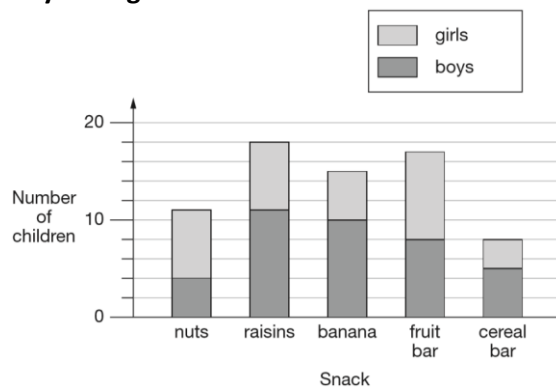
$\frac{6}{10}$ $\frac{1}{60}$ $\frac{60}{100}$ $\frac{1}{6}$

Kyle has drawn triangle ABC on this grid.
Holly has started to draw an identical triangle DEF. What will be the coordinates of point F?

This chart shows the favourite snacks of some boys and girls.

How many snacks were chosen by more girls than boys?

How many more boys than girls chose raisins?

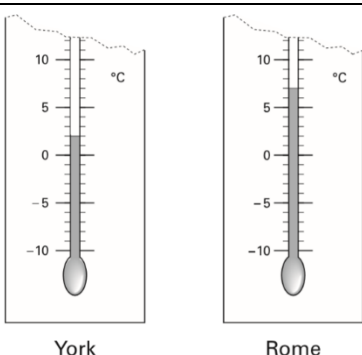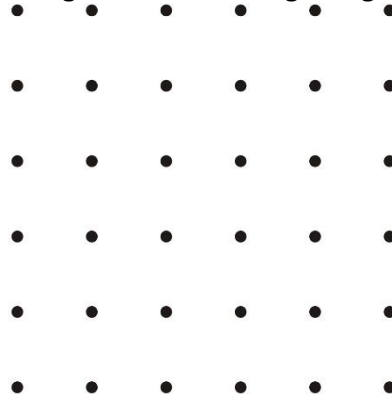Which snack was chosen by twice as many boys as girls?

☐ and ◯ each stand for a different number.

☐ = 34

☐ + ☐ = ◯ + ◯ + ☐

What is the value of ◯ ?

Use the dots to draw a shape that has 4 straight sides and no right angles.

These are the temperatures in York and Rome on a day in winter.

How many degrees colder is it in York than in Rome?

On another day, the temperature in York is 4°C
Rome is 7 degrees colder than York.
What is the temperature in Rome?

Here is a Venn diagram for sorting numbers. Write each number in its correct place on the diagram.

10   11   12   13
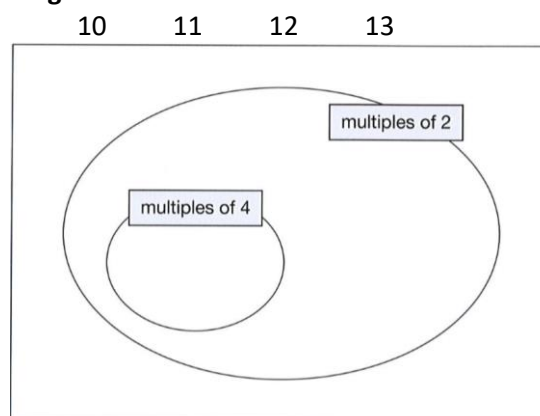
Circle the two fractions that are greater than $\frac{1}{2}$

$\frac{1}{8}$ $\frac{6}{10}$ $\frac{5}{8}$ $\frac{3}{10}$

Write these numbers in order, starting with the smallest.

8.12   1.8   8.118   8.2   1.28

smallest

40

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This pie chart shows how the children in Class 6 best like their potatoes cooked.
32 children took part in the survey.

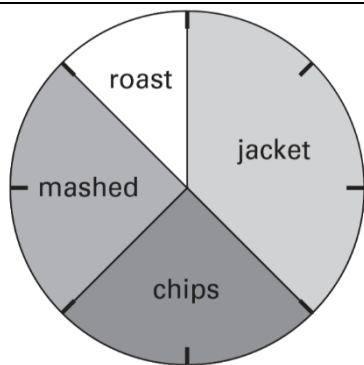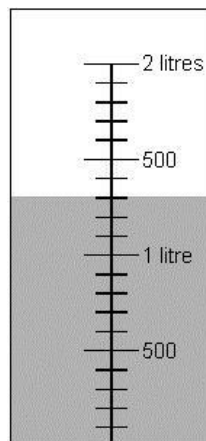**For each statement put a tick if it is correct.**

10 children like chips best.

25% of the children like mashed potatoes best.

$\frac{1}{5}$ of the children like roast potatoes best.

12 children like jacket potatoes best.

This is the scale on the side of a measuring jar.
There is some coloured water in the jar.
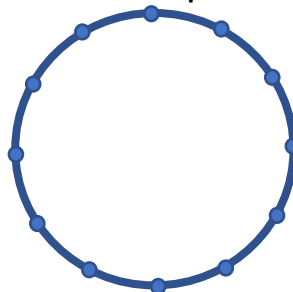How much more water is needed to make 2 litres?

Write the correct sign >, < or = in each of the following.

$(10 + 5) - 9$ ☐ $(10 + 9) - 5$

$3 \times (4 + 5)$ ☐ $(3 \times 4) + 5$

$(10 \times 4) \div 2$ ☐ $10 \times (4 \div 2)$
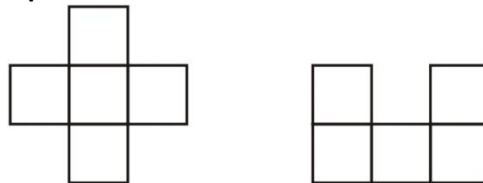
Join 4 points to make a square.
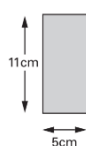

Write in the missing numbers.
One is done for you.

$0.321 = \dfrac{321}{1,000}$

$2.433 = \dfrac{\boxed{}}{1,000}$

$\boxed{} = \dfrac{457}{1,000}$

$\boxed{} = \dfrac{23}{1,000}$

Here are two shapes made with centimetre squares.

Each shape has 5 squares. Write one other thing which is the same about the two shapes.

Liam has two rectangular tiles like this.
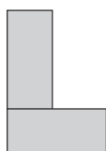
He makes this L shape.

What is the perimeter of Liam's L shape?

Here is part of a number line.
Write the two missing numbers in the boxes.
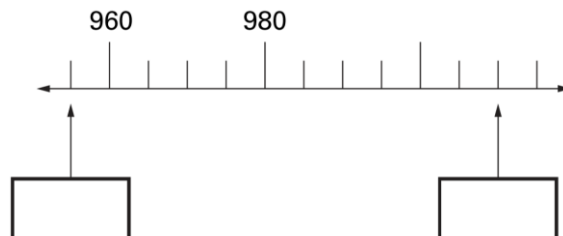
Here is a sorting diagram for numbers.
Write a number less than 100 in each space.

	even	**not** even
a square number		
not a square number		

Fill in the three missing whole numbers in this calculation.
Each number is less than 10

$\boxed{} \times \boxed{} \times \boxed{} = 105$

Here are five number cards.

| 0.47 | 10 | 100 | 1000 | 4.07 |

Use <u>four</u> of the cards to complete these calculations.

$$47 \div \boxed{} = \boxed{}$$

$$\boxed{} \times \boxed{} = 40.7$$

Sarah draws a quadrilateral. It has these properties:
- it has 2 long sides the same length;
- it has 2 short sides the same length;
- it does NOT have any right angles;
- it does NOT have reflective symmetry.

Write the mathematical name for Sarah's quadrilateral.

Write the missing numbers.

Improper fraction	Mixed number
$\frac{7}{4}$	$1\frac{3}{4}$
$\frac{\square}{2}$	$5\frac{1}{2}$
$\frac{17}{5}$	$3\frac{\square}{5}$

This pie chart shows the ingredients to make a food mixture for wild birds. Estimate the percentage of the mixture that is suet.

Mina uses 100 grams of millet in the mixture. Estimate how many grams of sunflower seeds she should use.

The pointer on this dial turns in a clockwise direction. The pointer is at 0. Which number does it point to after a turn of 270°?

The pointer moves from 10 to 11. How many degrees does it turn through?

Here is a square drawn on a coordinate grid. What are the coordinates of the point at the centre of the square?

(3, 10)   (9, 10)

(3, 4)   (9, 4)

Here is part of a temperature scale.

−5°C   0°C   5°C

A

What is the temperature shown at A?

What temperature is 20 degrees higher than A?

The table shows information about three solid shapes. Complete the table.

	number of edges	number of vertices
cuboid	12	
triangular prism		
triangle-based pyramid		

A cake costs 15p more than a biscuit. Megan bought a cake and two biscuits for 90p. How much do a cake and a biscuit each cost?

---

1 is both a square number and a cube number. 4 is a square number, but not a cube number. What is the next number that is both a square number and a cube number?
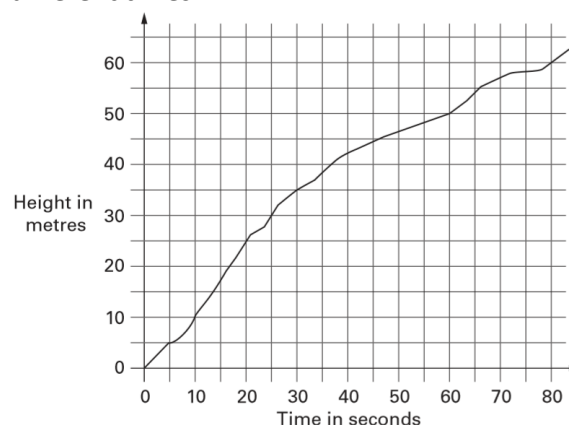

42

Here is a shape on a grid.
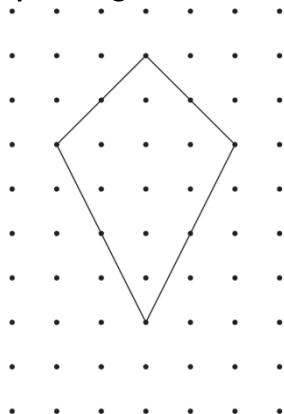
For each of the four sentences below, put a tick if it is true. Put a cross if it is not true.

1) The shape is a quadrilateral.

2) The shape has 2 lines of symmetry.

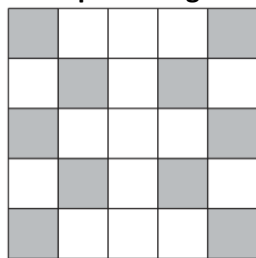3) The shape is a parallelogram.

4) The shape has one right angle.

This graph shows the height of a balloon at different times.

From the graph, find the height of the balloon at 50 seconds.

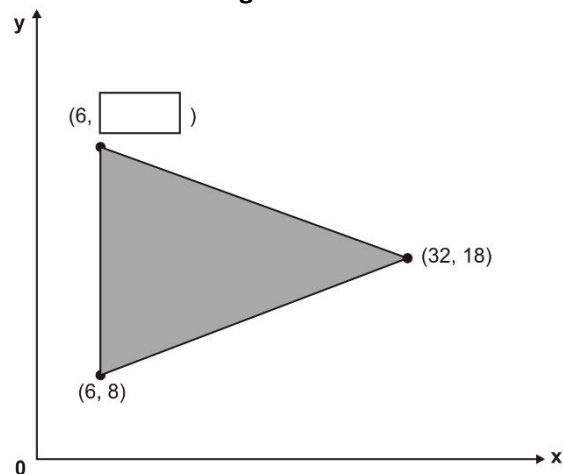**Use the graph to find how long it took the balloon to rise from 30 metres to 60 metres.**

Here is a pattern on a grid.
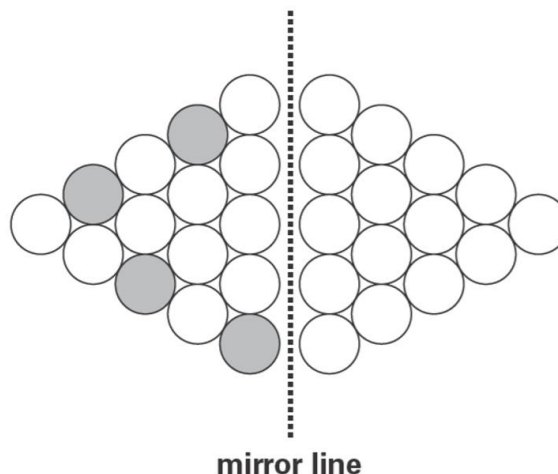**What percentage of the grid is shaded?**

Tick the two weights which are the same.

1.5 kilograms

1 kilogram 50 grams

15 kilograms

150 grams

1500 grams

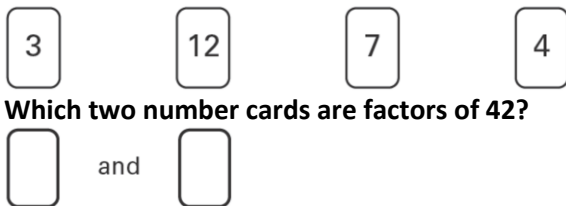**The shaded shape is an isosceles triangle.**
Write in the missing co-ordinate.

(6, ⬚)

(32, 18)

(6, 8)

Complete the reflection of this pattern in the mirror line.

mirror line

Here are four number cards.

3   12   7   4

Which two number cards are factors of 42?

⬚ and ⬚

A shop sells packs of sweets.
Each pack has one red sweet and two green sweets.
Sam buys some packs so he has 4 red sweets.
How many green sweets does he have?

Circle all the numbers that are multiples of 4
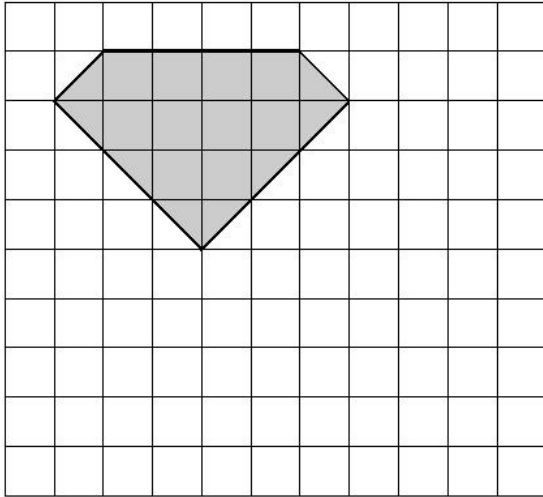
8   24   5   30   12

Lake School collected 10p coins for charity.
They raised £31.50
How many 10p coins did they collect?

On the grid, draw a rectangle which has the same area as this shaded pentagon.

Match each length to the correct box on the right. One has been done for you.

60 mm —————— 6 cm

| 6 m |
| 6 cm |

600 cm

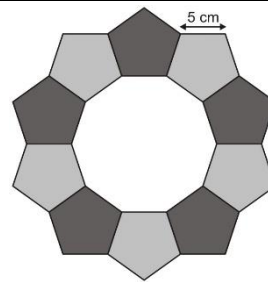| 600 m |

| 60 m |

6 km

| 6000 m |

Circle three numbers that add to make a multiple of 10
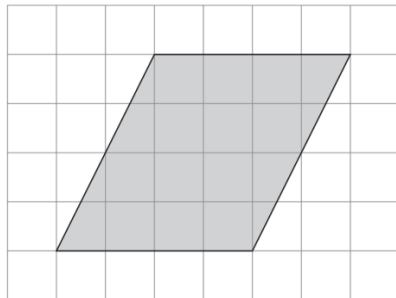
11   12   13   14

15   16   17   18   19

5 cm

This ring is made of regular pentagons, with sides of 5 centimetres. What is the length of the outer edge of the ring?

Look at the shaded shape on the square grid.

For each statement below, tick or cross to show if it is True or False.

1) The shaded shape is a quadrilateral.

2) The shaded shape has four equal sides.

3) The shaded shape has four equal angles.

4) The shaded shape has two pairs of parallel sides.

Abbie takes the temperature outside at midday on the first day of each month.
The graph shows her results from January to December.

Temperature in °C

30
25
20
15
10
5
0

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
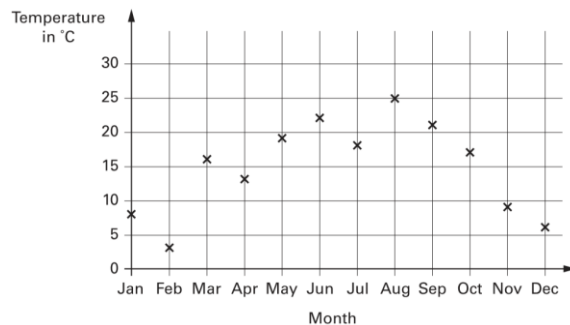
Month

How many months on the graph show a temperature between 10°C and 20°C?

Find the difference in temperature shown on the graph between July and August.

Complete the table.

Number	Rounded to nearest 1000	Rounded to nearest 100,000
385,704		400,000
809,601		

Write the missing numbers.

There are _____ days in a year and _____ days in a leap year.

Here is part of a calendar.

December

Mon	Tues	Wed	Thur	Fri	Sat	Sun
		1	2	3	4	
6	7	8	9	10		
13	14	15				
20	21	22				
27	28					

Tyrone's birthday is on December 18th.
On what day of the week is Tyrone's birthday?

Here is a grid of centimetre squares.
On the grid draw a quadrilateral.
**It must have only one pair of parallel sides.**
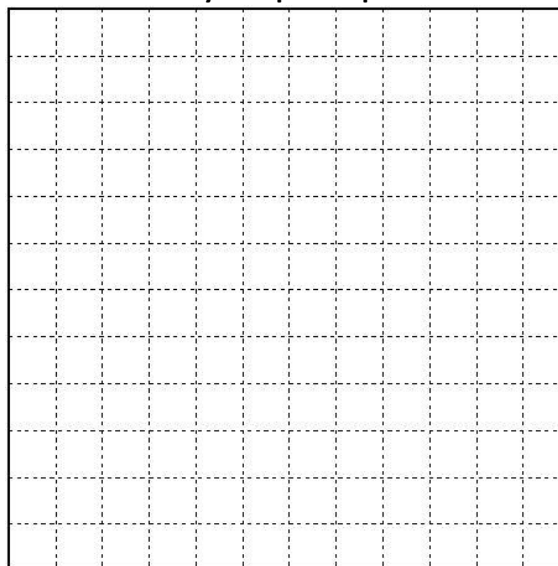
Millie and Ryan play a number game. What's my number?
Is it under 20? Yes
Is it a multiple of 3? Yes
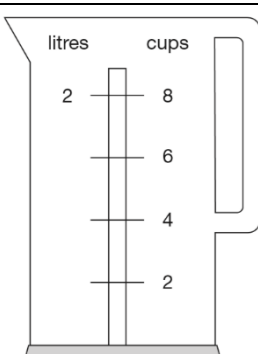**Is it a multiple of 5? Yes**
What is the number?

They play the game again.
Is it under 20? No
Is it under 25? Yes
Is it odd? Yes
Is it a prime number? Yes
What is the number?

Here is a regular octagon. Join three of the dots to make an isosceles triangle.

---

litres   cups

2 — 8
— 6
— 4
— 2
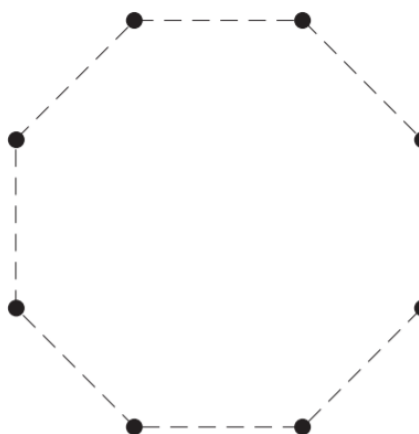
Nisha's kettle holds 2 litres of water.
How many millilitres are equal to 1 cup?

Here is a rectangle with a width of 15.7 centimetres.
The perimeter of this rectangle is 85 centimetres.
Calculate the length of the rectangle.

15.7cm

length

This three-digit number has 2 and 7 as factors.
  2 9 4
**Write another three-digit number which has 2 and 7 as factors.**

Here is a recipe for pasta sauce
300g tomatoes   120g onions   75g mushrooms
Josh makes the pasta sauce using 900g of tomatoes.
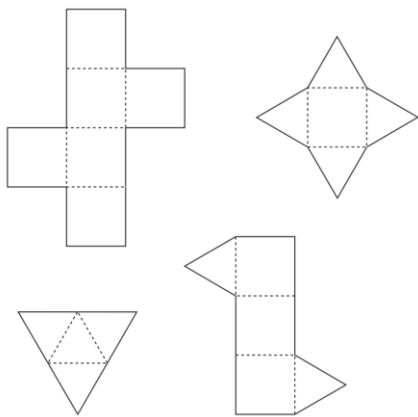**What weight of onions should he use?**

Children in Year 6 make number patterns.
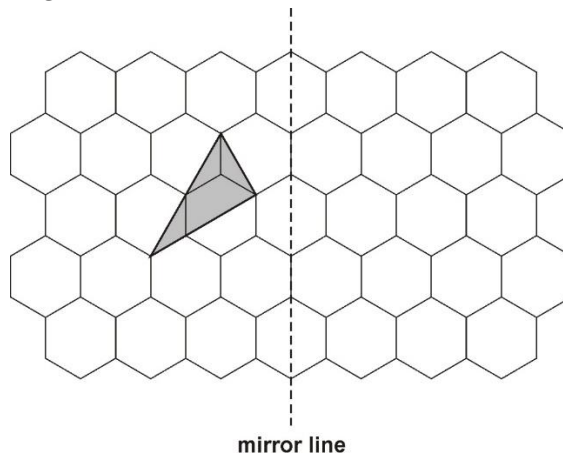**This group uses the rule '2 less than'.**
Write in the missing number.

8   6   4   2   0

This is part of a number line.
Write in the missing numbers.

2.09   2.1
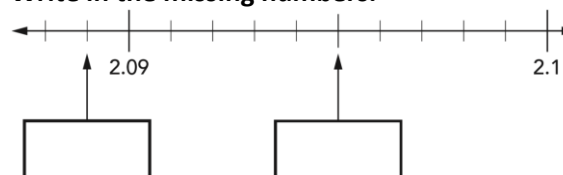
Here are some nets of shapes. For each net, put a tick if it folds to make a pyramid. Put a cross if it does not.

This grid is made of hexagons. Draw the reflection of the shaded shape in the mirror line.
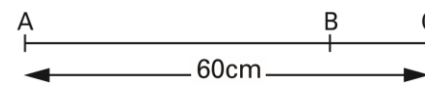

mirror line

Tick two cards that give a total of 5

$1\frac{1}{4}$ $1\frac{1}{2}$ $1\frac{3}{4}$

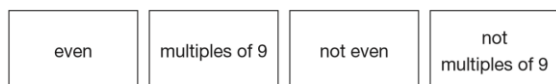$3\frac{1}{2}$ $3\frac{3}{4}$ $4\frac{1}{4}$

The distance from A to B is three times as far as from B to C.
The distance from A to C is 60 centimetres.
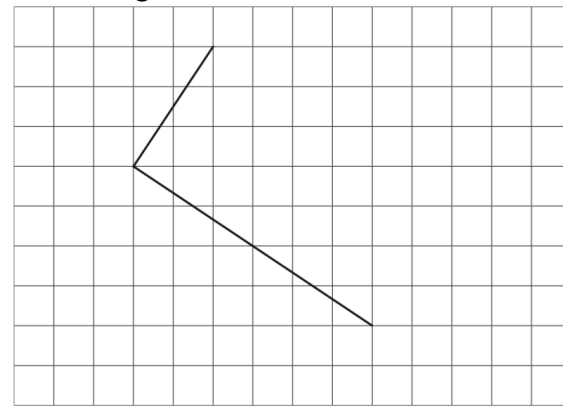

60cm

Calculate the distance from A to B.

Here are four labels.

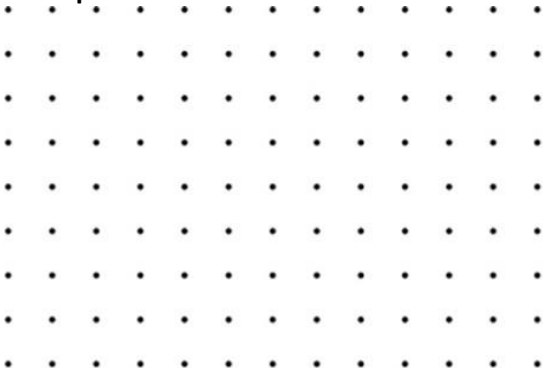| even | multiples of 9 | not even | not multiples of 9 |

Write each label in the correct position on the sorting diagram below.

72   56
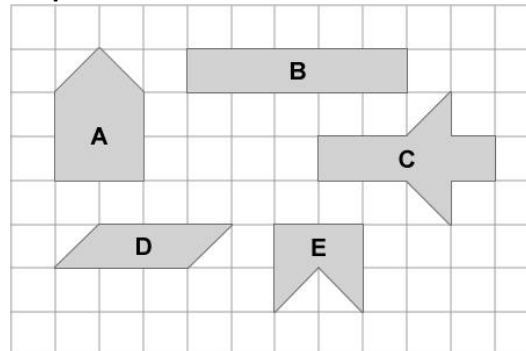54   84

63   49
45   75

Draw two more lines on this grid to complete the rectangle.

Grace has a rectangle with sides of 4 cm and 5 cm. Draw a different rectangle that has the same perimeter.

The diagram shows some shapes on a centimetre square grid.
Which two shapes have the same area as shape A?
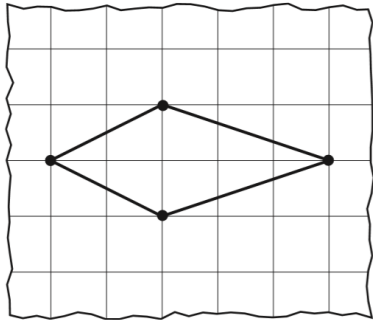

Luke buys 750 grams of apples.
Each apple weighs between 140 grams and 160 grams.
Circle the number of apples that Luke buys.
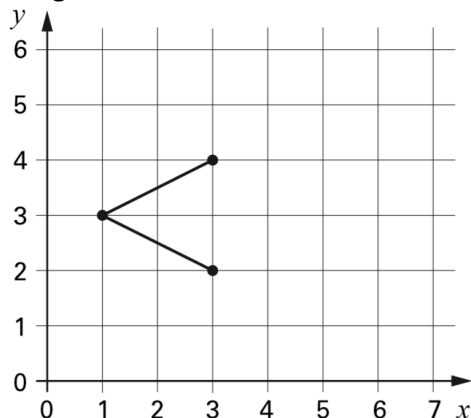
4   5   6   7   8

Chen is cooking some pasta.
The recipe says he needs 350 grams of pasta for 4 people.
How many kilograms of pasta does he need for 12 people?

46
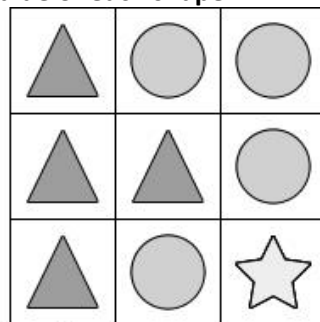
KeyStage2Maths.com

Zak draws this shape on a grid.

Lauren starts to draw an identical shape on the grid below.
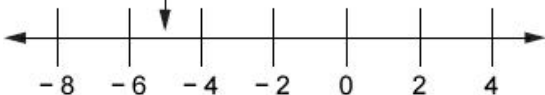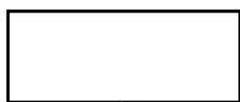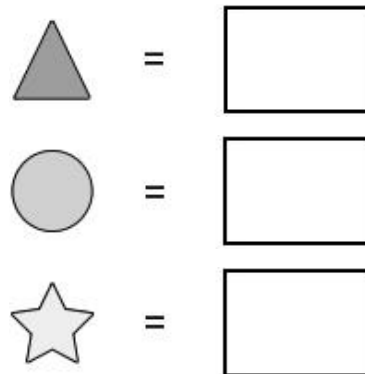

Write the coordinates of the missing point.

Each shape stands for a number. Work out the value of each shape.

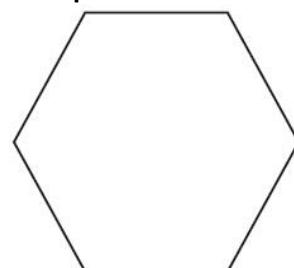

Total = 45

△ = ▢

◯ = ▢

☆ = ▢

Here is part of a number line.
Write the number shown by the arrow.

Here is a hexagon. Draw two straight lines across the hexagon to make two triangles and two quadrilaterals.

Ben thinks of a number.
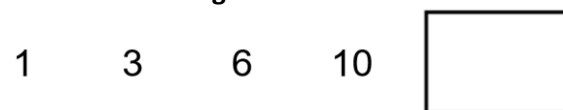**He adds half of the number to a quarter of the number.**
The result is 60
What was the number Ben first thought of?

Here is a number sequence.
Write the missing number.

1   3   6   10   ▢

All the children in Class 6 vote to pick a class captain.
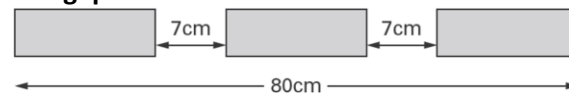**The choice is Holly or Dev or Joe.**
Dev gets 10% of the votes.
Joe gets twice as many votes as Holly.
What percentage of the votes does the winner get?

Three identical blocks are placed in a line 80 centimetres long.
The gaps between the blocks are each 7cm.

Work out the length of each block.

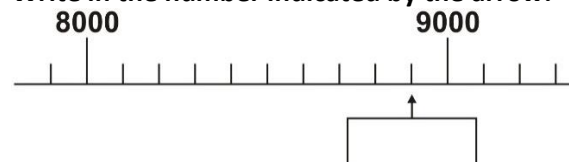**Place these numbers in order of size, starting with the smallest.**

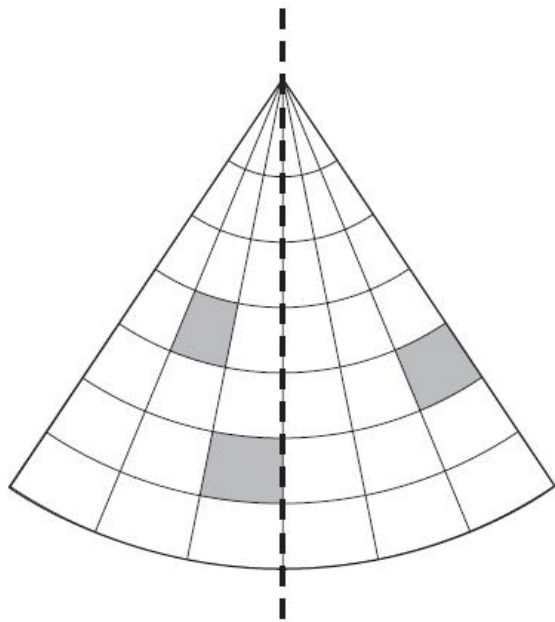0.19   0.9   0.091   0.109

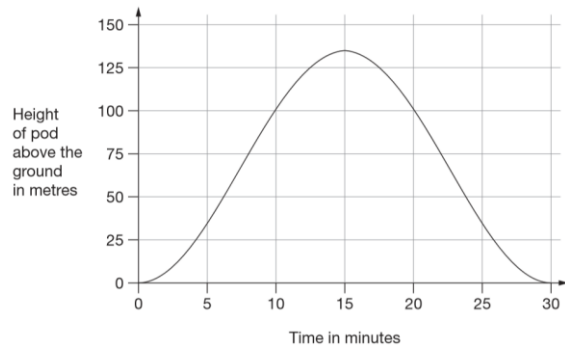▢   ▢   ▢   ▢
smallest

Here is part of a number line.
Write in the number indicated by the arrow.

8000   9000

Draw the reflection of all the shaded shapes in the mirror line.

The London Eye is a big wheel with pods to carry passengers. It takes 30 minutes for the wheel to make a complete turn.
This graph shows the height of a pod above the ground as the wheel turns.

How long from the start does it take the pod to reach a height of 75 metres?

How many metres above the ground is the pod at its highest point?

Match each fraction to its correct percentage equivalent.

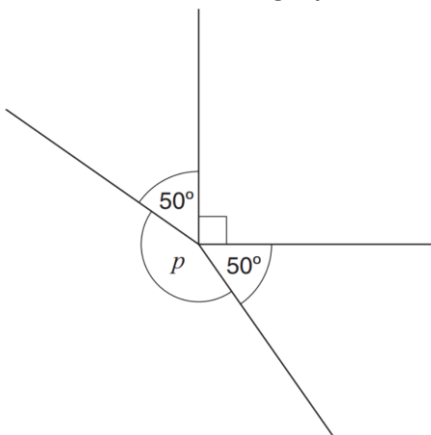$\frac{12}{50}$ 12%

16%

$\frac{12}{75}$ 24%

40%

$\frac{24}{40}$ 60%

Complete the table.

Shape	Number of		
	Faces	Vertices	Edges
Cuboid	6		
Triangular Prism		6	
Square-based pyramid			8

Calculate the size of angle p in the diagram.

Write the missing digits.

```
    ☐ 3 1 7
  ×       3 ☐
  ─────────────
    1 1 5 8 5
    6 9 5 1 0
  ─────────────
    8 1 0 9 5
```

Two letters have a total weight of 120 grams. One letter weighs twice as much as the other letter. Write the weight of the heavier letter.

Jade makes fruit salad. For every three apples, she uses one banana. She uses 27 apples. How many bananas does she use?

Write the missing numbers.
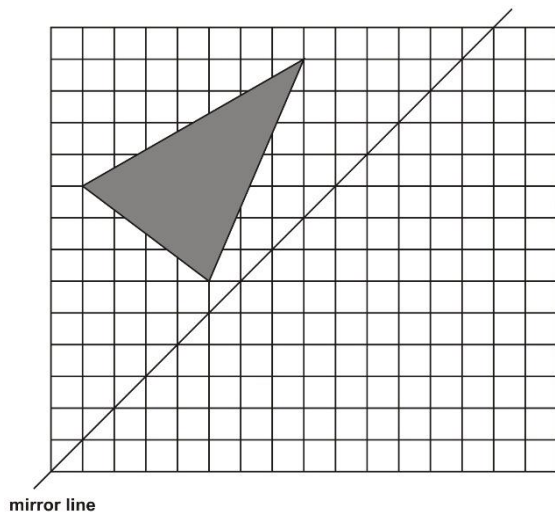
30,000   is a **thousand** more than →   ☐

☐   is **ten thousand** less than →   300,000
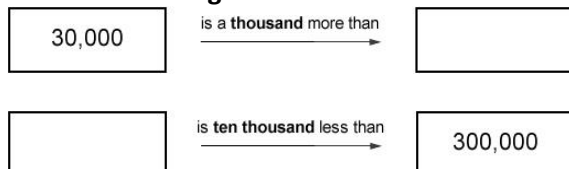
Write the two missing values to make these equivalent fractions correct.

$$\frac{☐}{10} = \frac{17}{5} = 3\frac{☐}{5}$$
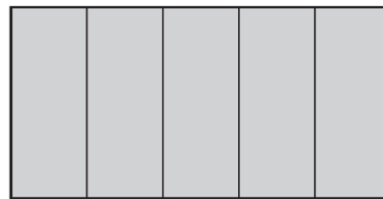
48

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Draw the reflection of the shaded triangle in the mirror line.

mirror line

Lara has some identical rectangles. They are 7 centimetres long and 2 centimetres wide.

7 cm

2 cm
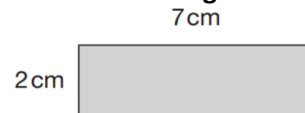
She uses five of her rectangles to make the large rectangle below.


What is the perimeter of the large rectangle?

What is the area of the large rectangle?

**Here is the calendar for the August when Luke was on holiday.**

August					
Monday	July 29	5	12	19	26
Tuesday	July 30	6	13	20	27
Wednesday	July 31	7	14	21	28
Thursday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	31
Sunday	4	11	18	25	Sept 1

Luke came back from holiday on August 4th. He went on holiday two weeks before that date. On what date did Luke go on holiday?
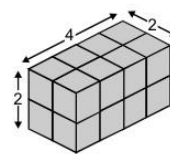
These cuboids are made from small cubes. Write how many small cubes there are in each cuboid. The first is done for you.
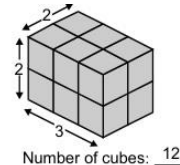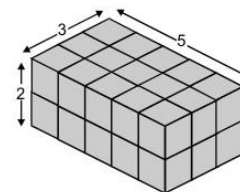

Number of cubes: 12
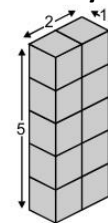
Number of cubes: ____

Number of cubes: ____

Number of cubes: ____

Find two cube numbers that total 152

[ ] **+** [ ] **= 152**

Chris saves 50p coins.
He has saved 45 of them.
How much money has Chris saved?

Forest School sells badges for charity.
For each badge sold, £1.20 is given to a charity.
How much does the charity get when 12 badges are sold?

If the charity got £24, how many badges were sold?

Here are four lengths.

| 55 mm | 5 cm | 0.55 m | 5.5 mm |

Write the lengths in order, starting with the shortest.

[ ] [ ] [ ] [ ]

shortest

Seb goes on a sponsored walk to collect money for charity.
His aunt promises to pay 75p for each kilometre he walks.
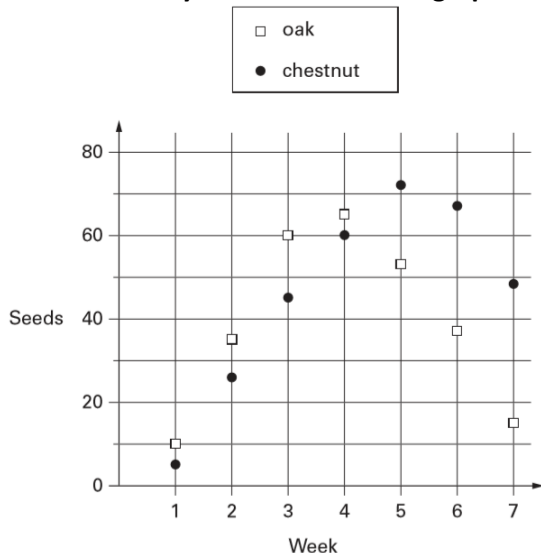**She pays him £6.75 at the end of the walk.**
How many kilometres does Seb walk?

**Complete this sentence.**
All equilateral triangles have

49

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Class 6 count how many seeds they find under two trees. They show the data in a graph.

Legend: □ oak ● chestnut

y-axis: Seeds (0, 20, 40, 60, 80)
x-axis: Week (1, 2, 3, 4, 5, 6, 7)

How many seeds did they find in week 3 altogether?

In how many weeks did they find more than 40 chestnut seeds?

Here are five letters on a scale.

1 litre .... B ...... D .... 2 litres
A   C   E
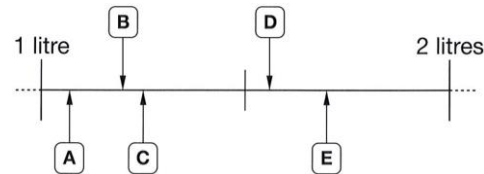
Match each letter to one of the capacities in the list below.
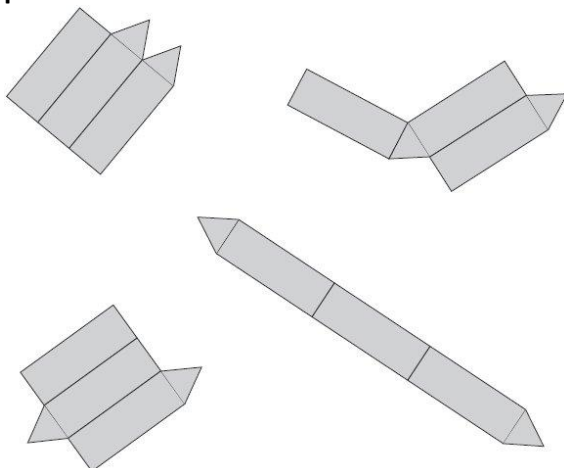
1200 ml ☐

1.7 l ☐

$1\frac{1}{4} l$ ☐

1560 ml ☐

1.07 l ☐

Two of these diagrams are nets for a triangular prism. Put a tick in them.

Here are some number cards.

7   5   9   3   11

Use two of the cards to make a fraction which is less than $\frac{1}{2}$

☐
─
☐

How much less than 1 is your fraction?

Here are four digit cards.

3   5   4   6

Use each of the digits _once_ to make a total that is a multiple of 5

☐☐ + ☐☐

Round each of these numbers to the nearest whole number.

13.7 is nearest to _____

$8\frac{3}{8}$ is nearest to _____

3.38 is nearest to _____

Write in the missing numbers in this sequence.

480   240   ☐   60   ☐   15

Find two square numbers that total 45

☐ + ☐ = 45

**The temperature in the fridge is 4°C.
The temperature in the freezer is -18°C.
What is the difference in temperature between the fridge and the freezer?**

**Jamie takes three parcels to be posted.
One parcel has a mass of 750 g
Another weighs 2.8 kg
The total mass of the three parcels is 5.13 kg
What is the mass of the third parcel?**

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All the children at Park School chose their favourite soup.
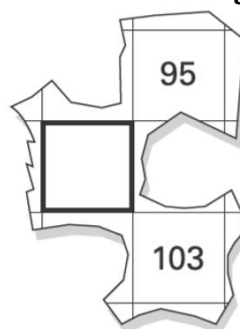The graph shows the results.
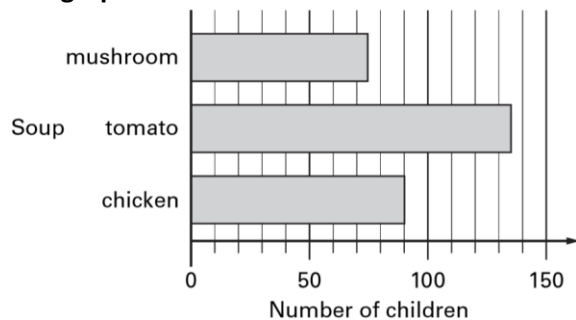
How many more children chose chicken soup than mushroom soup?

Robbie says, 'More than half of the children chose tomato soup.' Is he correct?
Explain how you can tell from the graph.

Here is part of a number grid.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Here is another part of the same grid.
Write in the missing number.

Here are three supermarket bills.

TOTAL £74.68   TOTAL £65.90   TOTAL £59.05

Tom rounds each bill to the nearest £10 and then adds them up. What is the total amount that Tom gets?

Mary adds up the three bills exactly.
What is the difference between her total and Tom's total?

Megan says, *'If two rectangles have the same perimeter, they must have the same area.'*
Is she correct? Explain how you know.

Emma thinks of two prime numbers.
She adds the two numbers together.
Her answer is 36
Write all the possible pairs of prime numbers Emma could be thinking of.

A gardener plants tulip bulbs in a flower bed.
She plants 3 red bulbs for every 4 white bulbs.
She plants 60 red bulbs.
How many white bulbs does she plant?

Write in what the missing numbers could be.

$$\left(\boxed{} \div \boxed{} \right) + 90 = 100$$

8 friends share £434 equally between them.
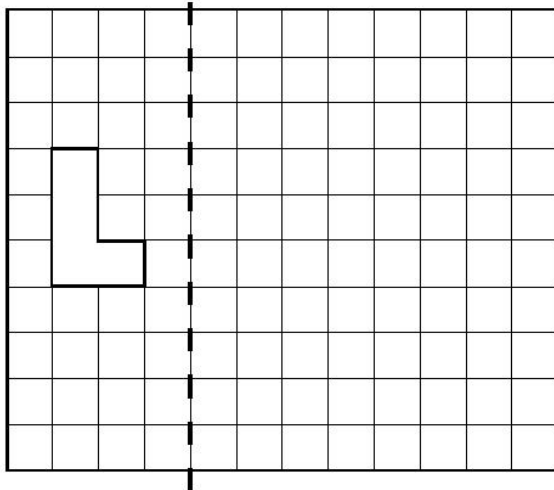How much does each person receive?

Circle the number that is equal to $\frac{3}{4}$

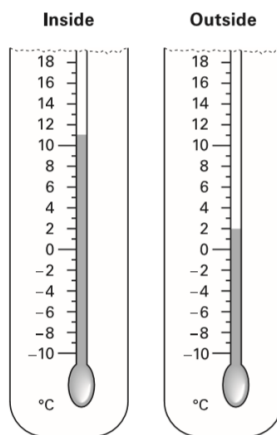0.34   7.5   3.4   0.075   0.75

Ryan collects 2 comics each week for a whole year.
How many comics does he collect in a year?

51

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On the grid, draw the reflection of the shape in the mirror line.

mirror line

Two thermometers show the temperature inside and outside a greenhouse on a day in January.

How many degrees warmer was it inside the greenhouse than outside?

Later the temperatures were -1°C inside and -8°C outside. What is the difference between these two temperatures?

The following quadrilaterals all have a perimeter of 36 cm. Here is a table to show the length of each side.
Complete the table. One quadrilateral is done for you.

|	Side lengths			
square	9 cm	9 cm	9 cm	9 cm
rectangle	3 cm			
rhombus	9 cm			
kite	10 cm			

P stands for a multiple of 3
Q stands for a different multiple of 3
Tick each statement according to whether it is always true, sometimes true or never true.

	always true	sometimes true	never true
The **sum** of P and Q is a **multiple of 6**			
The **difference** between P and Q is a **multiple of 3**			
The **product** of P and Q is a **multiple of 9**			

Here is a grid of 20 squares.
What percentage of the grid is shaded?
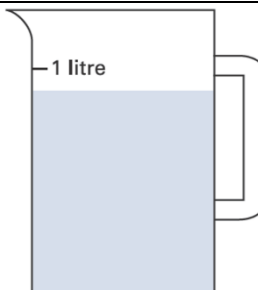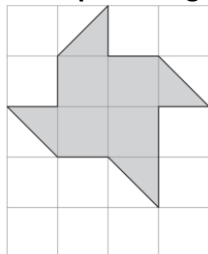

Sophie poured some water out of a litre jug. Look how much is left in the jug. Estimate how many millilitres of water are left.

This relationship connects the number of pencils and the number of boxes.
number of pencils = number of boxes × 12
How many pencils are in 18 boxes?

A drink and a box of popcorn together cost 90p.
2 drinks and a box of popcorn together costs £1.45
What does a box of popcorn cost?

Here are five number cards.

$\frac{1}{2}$ $1\frac{1}{2}$ 2 $2\frac{1}{2}$ $3\frac{1}{2}$
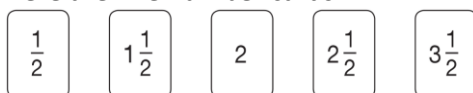
Use three of the number cards to make this calculation correct.

$\left(\boxed{} + \boxed{} \right) \times \boxed{} = 10$
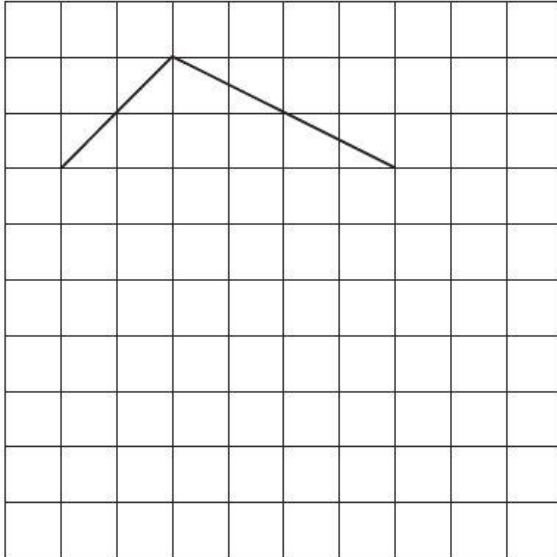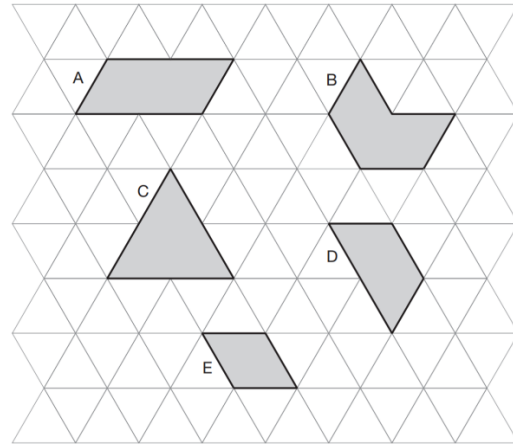

A field measures 89.5 m by 60 m.

What is the perimeter of the field?

The lines drawn on the grid are two sides of a pentagon. Complete the pentagon.
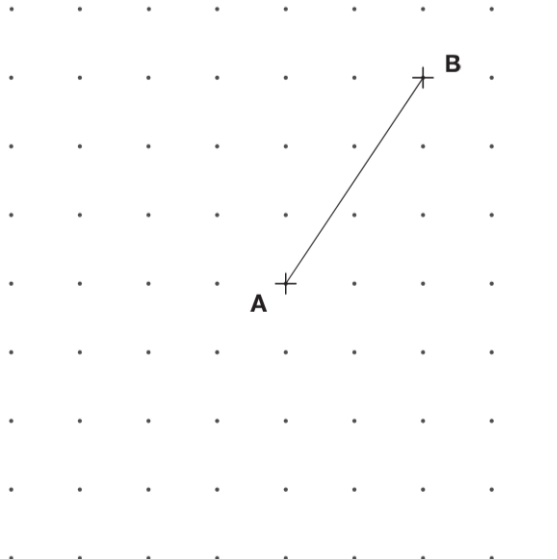

Here are five shapes made from equilateral triangles.
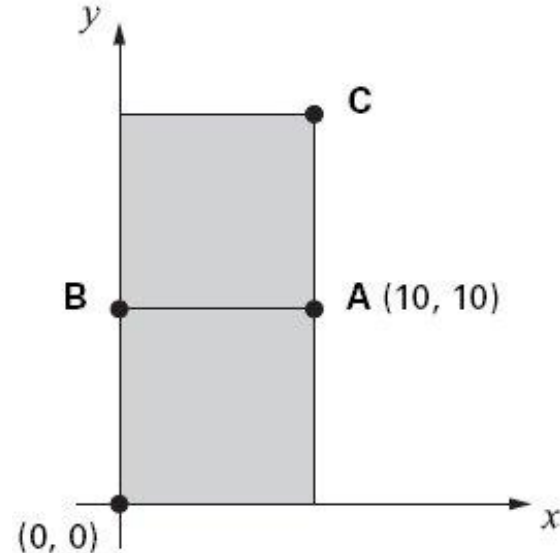

Write the letter of the shape that is a rhombus.

Write the letter of the shape that has only one pair of parallel sides.

Here is a grid of dots. Point A and point B are joined by a straight line. Draw a line to join point A to another dot on the grid so that the two lines make a right angle.

The diagram shows two identical squares.

A is the point (10, 10).
What are the coordinates of B and C?

The factors of 11 sum to 12
Write the other number whose factors sum to 12

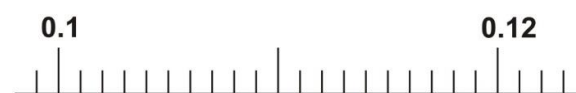**Circle the percentage that is equal to $\frac{9}{100}$**

90%   90.9%   99%   9.9%   9%

Put these values in order with the smallest first.

5²   3²   3³   2³

smallest			largest

Here is a number line.
Draw an arrow to show the position of 0.111

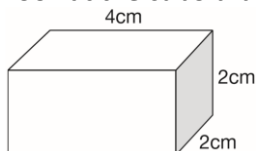0.1   0.12

Write the three prime numbers which multiply to make 231

☐ × ☐ × ☐ = 231

Circle all the multiples of 8 in this list of numbers.
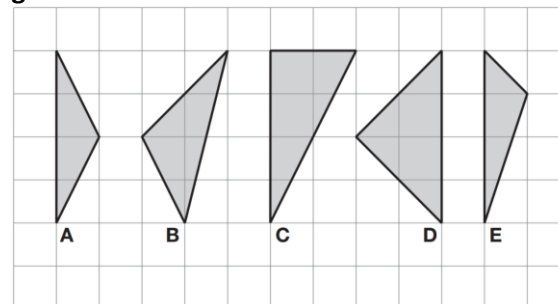
18   32   56   68   72

Look at the cuboid below.

4cm

2cm

2cm

Draw two more faces to complete the net of the cuboid.

Here are five shaded triangles on a square grid.

A   B   C   D   E

Write the letter of each triangle that has a right angle.

Write the letter of each triangle that has two equal sides.

Sarah had a bag of cherries.
She ate 5 cherries, then gave
half of what she had left to Liam.
Liam ate 5 of his cherries, then gave half of what he had left to Amy.
Amy got 2 cherries.
How many cherries did Sarah have in her bag at the start?

Here is a shaded shape on a 1 cm square grid.
What is the area of the shaded shape?

1cm
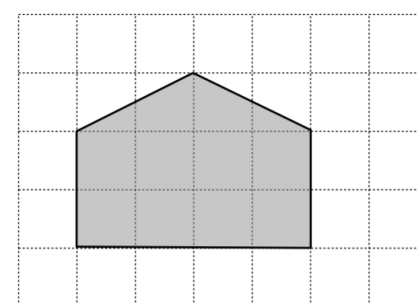
Here is a grid of regular hexagons. The shaded shape has an area of 3 hexagons and a perimeter of 14cm. Draw another shape on the grid which has an area of 4 hexagons and a perimeter of 14cm.
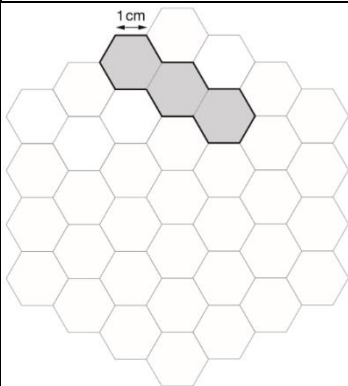
Draw the reflection of the shaded shape in the mirror line.

mirror line
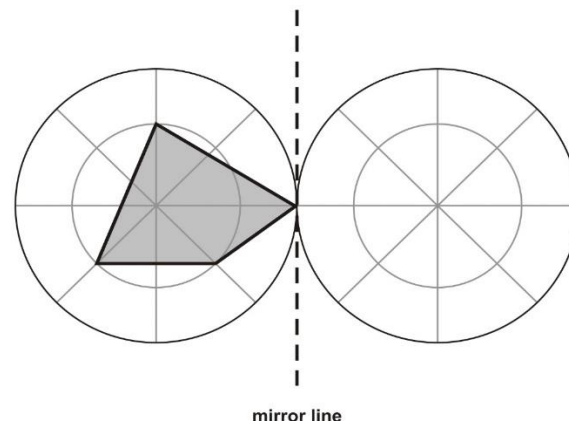
Put a tick in each row to complete this table.
One has been done for you.

	greater than $\frac{1}{2}$	less than $\frac{1}{2}$
0.9	✓	
0.06		
$\frac{11}{20}$		
0.21		

On this scale, the arrow shows the weight of a pineapple.

0   1   2
                              kg

Here is a different scale. Mark with an arrow the weight of the same pineapple.

0   1   2   3   4
                        kg

54

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This table shows the weight of some fruits and vegetables. Complete the table.

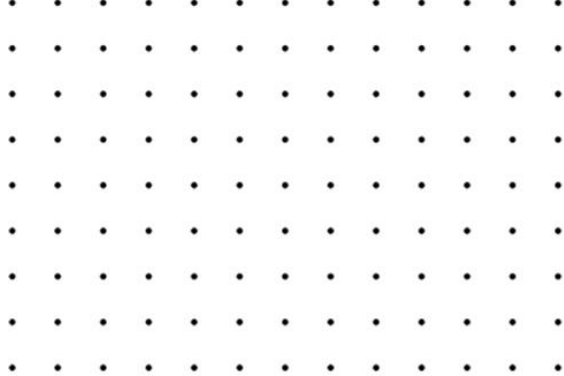|	grams	kilograms
potatoes	3500	3.5
apples		1.2
grapes	250	
ginger		0.03

Rebecca has rectangular tiles like this.
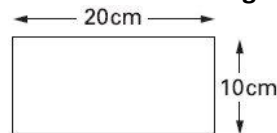
20cm
10cm

**She makes a larger rectangle using 4 of the tiles. What is the area of the larger rectangle?**

**Join the dots to draw a rectangle that has an area of 20 cm² and a perimeter of 18 cm.**

Jamie draws a triangle. He says, 'Two of the three angles in my triangle are obtuse.' Explain why Jamie cannot be correct.

This shape is made with two cuboids. Write how many small cubes there are in this shape.
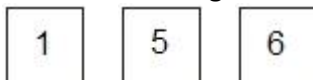
2   2
4
4
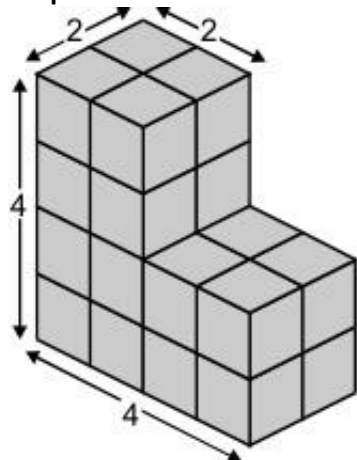
Number of cubes:_____

This chart shows the times when 5 children were at a swimming pool one afternoon.

Lara
Amir
Stefan
Grace
Tom

4:00 4:15 4:30 4:45 5:00 5:15 5:30 5:45
Time (pm)
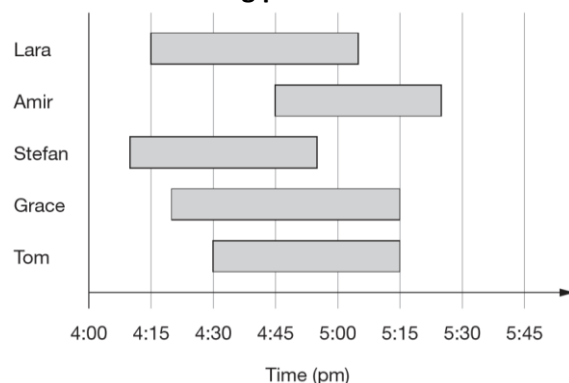
Who was the next person to arrive after Stefan?

Who spent the longest time at the swimming pool?

Here are three digit cards.

1   5   6

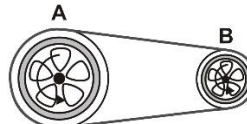**Choose two cards each time to make the following two-digit numbers. The first one is done for you.**

an even number   **56**

an prime number

a common factor of 60 and 90

a common multiple of 5 and 13

A and B are two chain wheels on a bike.

A   B

For every 2 complete turns that wheel A makes, wheel B makes 5 complete turns. If wheel A makes 150 turns, how many turns will wheel B make?

If wheel B makes 90 turns, how many turns will wheel A make?

Here is part of the morning train timetable from Perth to Midland in Australia.

Perth	07:11	07:20	07:27	07:35	07:43	07:55
Maylands	–	07:28	07:33	07:43	07:49	08:03
Ashfield	–	–	07:38	–	07:54	–
Success Hill	07:25	–	07:41	–	07:57	–
Midland	07:32	07:41	07:48	07:56	08:05	08:16

What time is the first train from Maylands that stops at Success Hill?

Mr Evans is in Perth and wants to be in Midland by 08:00
What is the time of the latest train he can take from Perth?
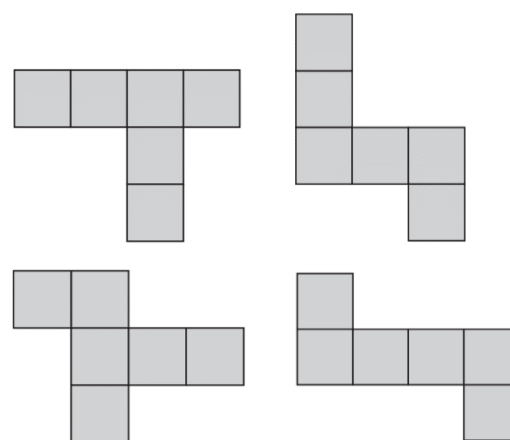
Here is a square with a design on it. The square is reflected in the mirror line. Draw the missing triangle and dots on the reflected square.
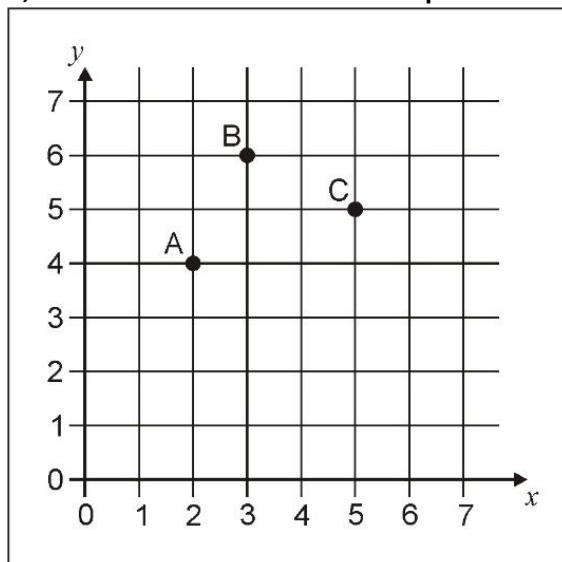

mirror line
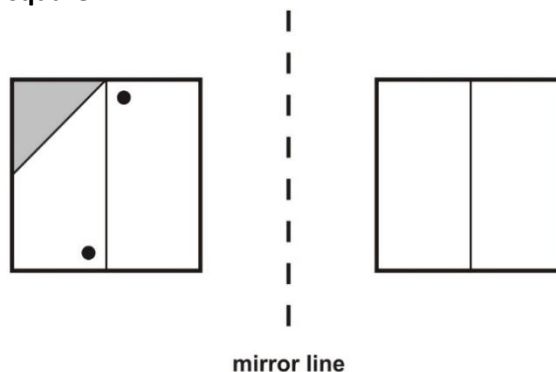
Here is a sorting diagram.
Write a correct number in each of the two boxes.
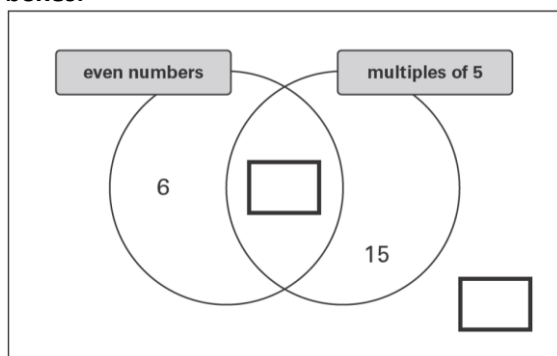
Here are four diagrams. On each one, put a tick if it is a net of a cube. Put a cross if it is not.

A, B and C are three corners of a square.

What are the co-ordinates of the other corner?

Here are some number cards.

| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

Joe picks two even numbers. Dev picks two odd numbers.
Joe gives one of his cards to Dev. Dev gives one of his cards to Joe.
Joe says, 'Now my cards are both square numbers.'
Dev says, 'Now my cards are both multiples of 5.'
What numbers did they each start with?

Joe started with ☐ and ☐

Dev started with ☐ and ☐

Alfie buys two books, each at the same price.
He pays with a £10 note and gets £2.30 change.
What is the cost of one book?

1 and 35 is a factor pair of 35
What is the other factor pair of 35?

☐ and ☐

56

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× 10	× 100	× 1000
÷ 10	÷ 100	÷ 1000

Complete the number sentences using these cards.

36.55 ☐ = 365.5

0.2 ☐ = 0.002

7800 ☐ = 7.8

47.3 ☐ = 4730

All the water in these two containers is to be poured into the empty container below.
Draw where the water level will be in the container.

500 ml / 400 ml / 300 ml / 200 ml / 100 ml

500 ml / 400 ml / 300 ml / 200 ml / 100 ml

1 litre

1/2 litre

A white square is painted in one corner of a grey square.
Each side of the white square is half the length of a side of the grey square. What is the area of the grey section?

12cm

12cm

Here is a grid with eight squares shaded in. Shade in two more squares to make a symmetrical pattern.

Strips of paper are each 30 centimetres long.

30cm

Steve joins strips of paper together to make a streamer.
The strips overlap each other by 5 cm.

5cm   5cm

30cm   30cm

How long is a streamer made from only 2 strips?

Sunita makes a streamer that is 280 cm long. How many strips does she use?

Amir says, 'All numbers that end in a 4 are multiples of 4.'
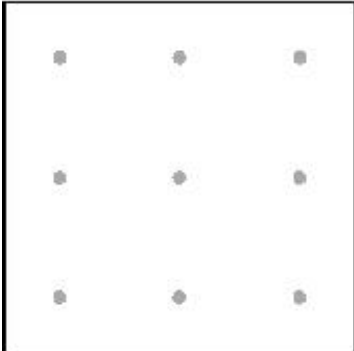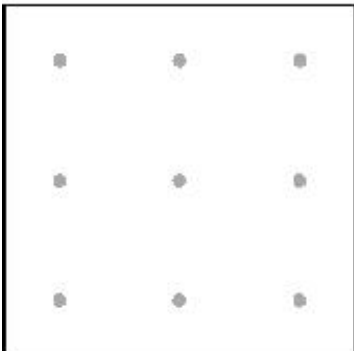**Is he correct? Explain how you know.**

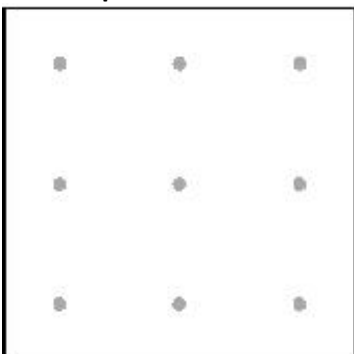Here is a triangle made using the pins on a pin board.
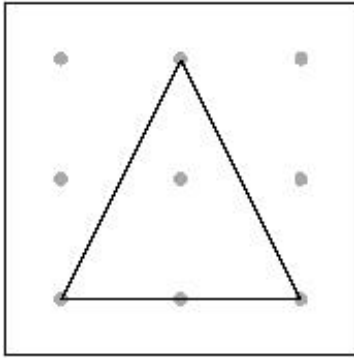
Show how to make a square. Use the pins below.

Now show how to make a different sized square. Use the pins below.

Now show how to make another square which is a different size to the ones you have drawn. Use the pins below.
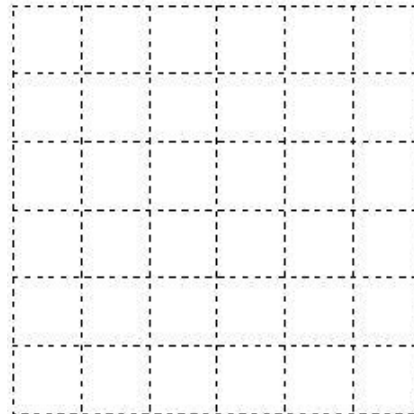
A shape has 4 right angles.
It has 4 straight sides.
All 4 sides are the same length.
Draw what the shape could be.
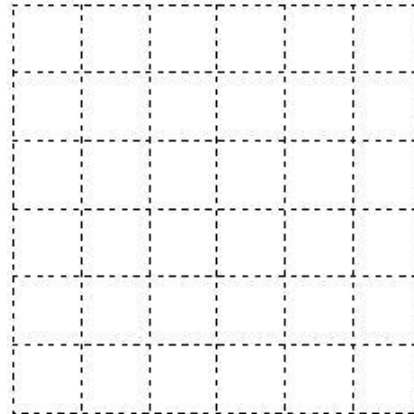
A different shape has 4 right angles.
It has 4 straight sides.
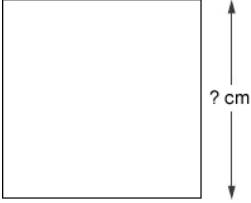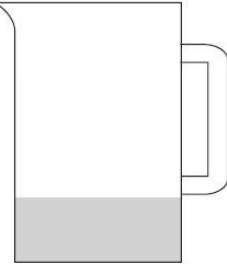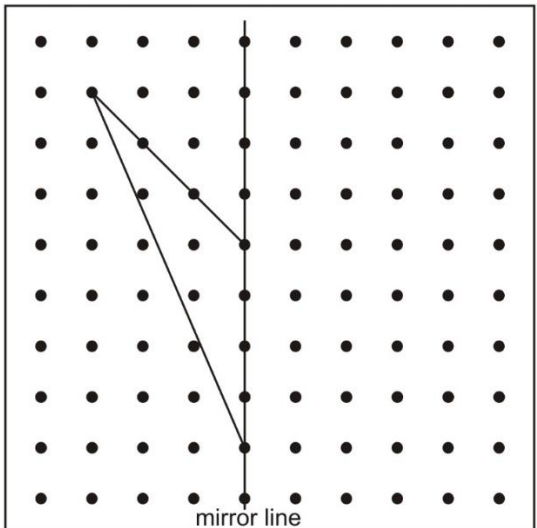It has 2 pairs of parallel lines.
Draw what the shape could be.
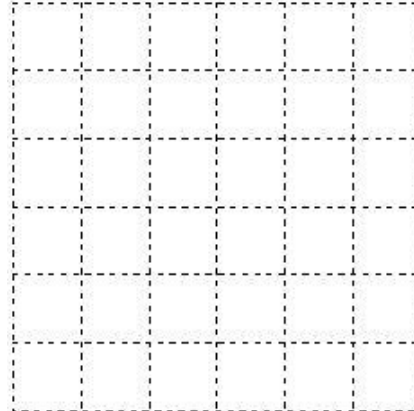
A shape has no right angles.
It has 4 straight sides.
It has 2 pairs of parallel lines.
Draw what the shape could be.

Write the missing numbers in this sequence.

64   32   16   ☐   4   ☐

Calculate ¾ of £15

In a class, 18 of the children are girls.
A quarter of the children in the class are boys.
Altogether, how many children are there in the class?

You save £1.50 per week.
How many weeks before you can buy a book which costs £18.49?

58

A shop sells flowers.
daffodils: 99p for a bunch
roses: 40p each
John buys 3 bunches of daffodils.
How much does he pay altogether?

Karpal has £4.00 to spend on roses.
How many roses can she buy for £4.00?

Grace has a square.
It has a perimeter of 28 cm.
What is the side length of her square?

? cm

Chen chooses a prime number.
He multiplies it by 10
and then rounds it to the nearest hundred.
His answer is 400
Write all the possible prime numbers Chen could have chosen.

This is what it costs to visit a castle.
Adults £2.45
Children (11 and over) £1.30
Children (under 11) 95p
How much will it cost for 18 children (under 11) to visit the castle?

Round the following numbers.

 5 4 0 to the nearest 100 _____

 2 3 6 to the nearest 10 _____

 $1\frac{3}{4}$ to the nearest whole number _____

The jug holds 800 ml of water when it is full. Estimate the amount of water that is in the jug.

Jack says, *"Two 3D shapes with the same number of faces as each other also have the same number of vertices as each other."*
Is Jack correct? Explain how you know.

Draw the reflection of this triangle in the mirror line.

mirror line

Emily chooses two numbers.
She adds the two numbers together and divides the result by 2
Her answer is 44
One of Emily's numbers is 12
What is Emily's other number?

David and his friends prepare a picnic.
Each person at the picnic will get:
3 sandwiches, 2 bananas, 1 packet of crisps
The children pack 45 sandwiches.
How many bananas do they pack?

Four children are in a race.
Chen is 2 metres ahead of Alfie.
Nina is 5 metres behind Megan.
Alfie is 3 metres behind Megan.
Write the names of the runners in order, starting with the child who is furthest ahead.

_____ _____ _____ _____
furthest
ahead

Explain why 125 is a cube number.

59

This chart shows the number of books some children read last month.
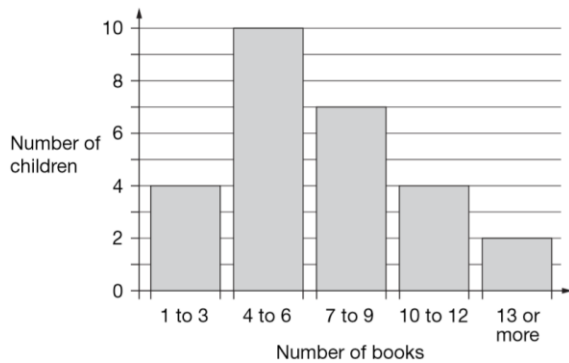
How many children altogether read more than 9 books?

7 children read 4 books. 1 child read 5 books. Lin says, 'That means 2 children read 6 books'. Explain how she can work this out from the chart.
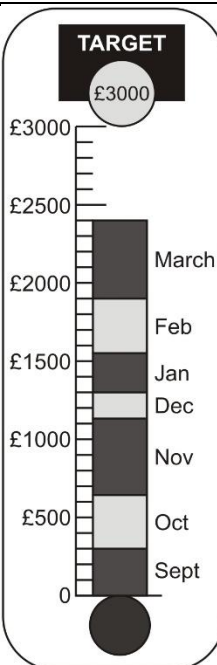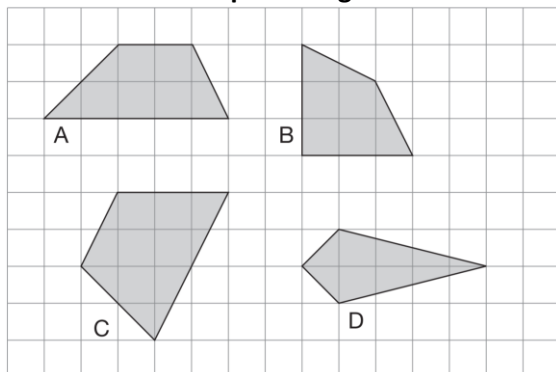

A school collects money for charity.
This chart shows how much has been collected.
The target is £3000
**Estimate how much more money the school needs to reach the target.**

Anil says, 'The chart shows that we will reach the target in two months.'
Use the chart to explain why Anil may be wrong.

Here are some shapes on a grid.

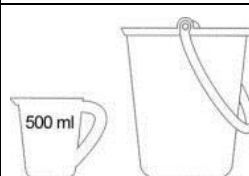**Write the letter of each shape that has one pair of parallel sides.**

Shade in two more squares to make this design symmetrical about the mirror line.

mirror line
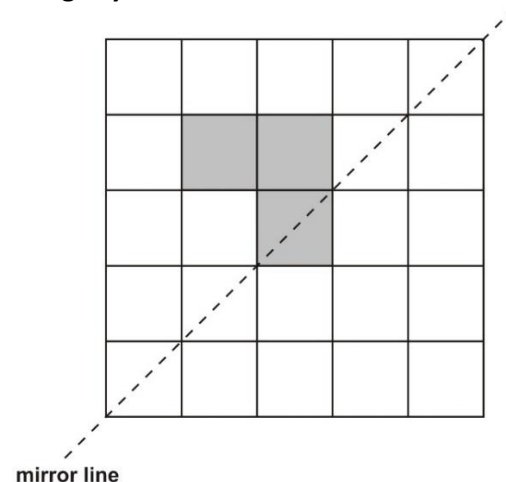
Tina measures the angles in a triangle. The sketch shows her results.
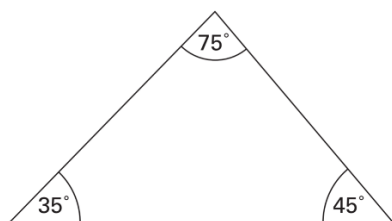

How can you tell that Tina has made a mistake?

Steve needs to put 1 litre of water in a bucket. He has a 500 ml jug. Explain how he can measure 1 litre of water.

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Write one number which fits all three of these statements.
It is a multiple of 4
It is a multiple of 6
It ends in '8'

**Explain why a number which ends in '3' cannot be a multiple of 4**

The shaded shape is a parallelogram.
Write in the coordinates of point A.

(20, 27)   A

(15, 17)   (35, 17)
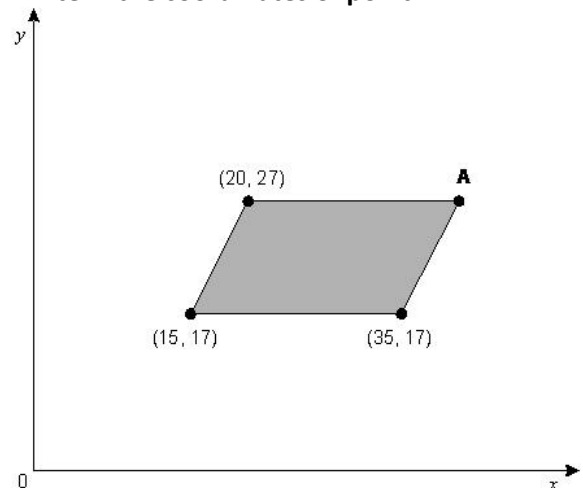
Runa and Jon each start with the same number. Runa rounds the number to the nearest hundred. Jon rounds the number to the nearest ten. Runa's answer is double Jon's answer. Explain how this can be.

Draw a rectangle whose perimeter is 18 centimetres (cm).
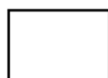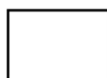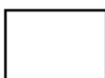**You must use the lines of the grid.**

1 cm

1 cm
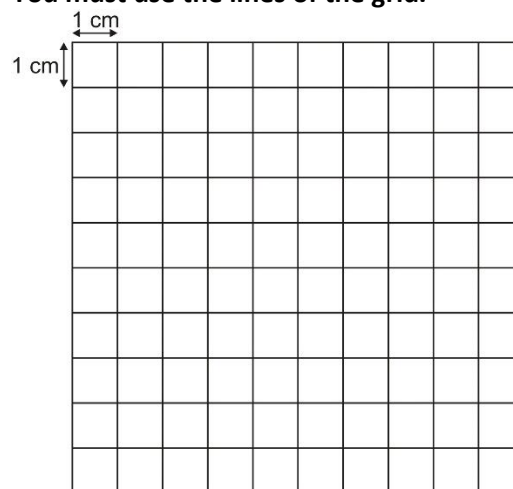
Write these numbers in order, starting with the smallest.

$\frac{5}{4}$ $\frac{7}{6}$ $\frac{17}{12}$ $\frac{4}{3}$
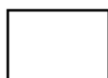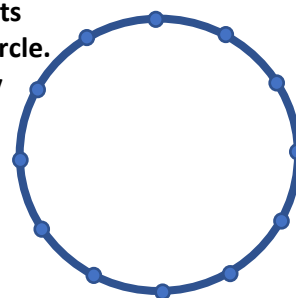

smallest   largest

---

There are twelve points marked around this circle. The points are equally spaced. Join 3 points to make an isosceles triangle.

Here is a diagram for sorting numbers.
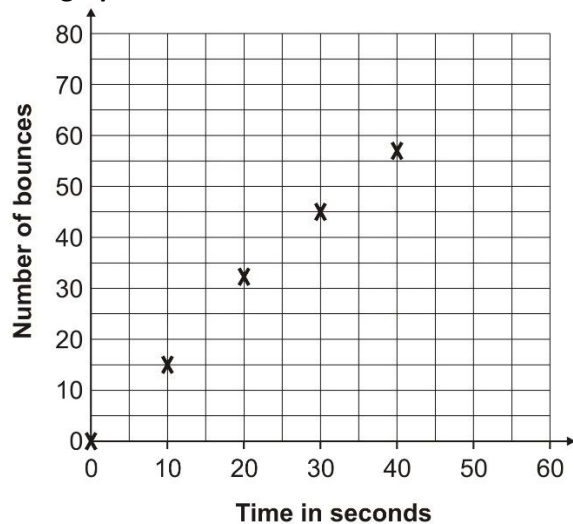**Write one number in each white section of the diagram.**

	less than 1000	1000 or more
multiples of 20		
not multiples of 20		

Here are some shapes drawn on a grid.
Write the letters of the two shapes that are equal in area.
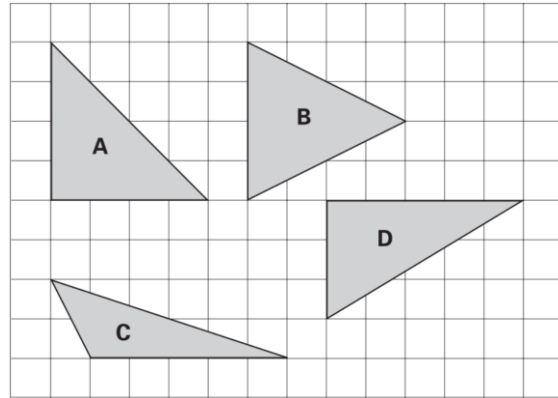

A   B   C   D

61
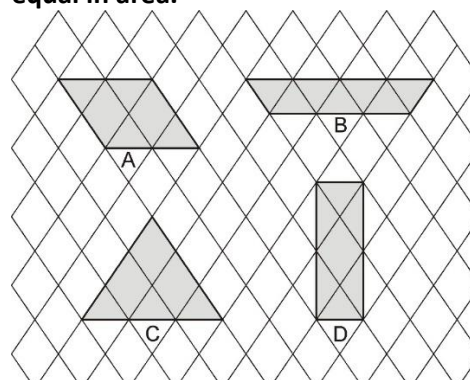
Mandy bounces a ball. She plots the results on this graph.

After 50 seconds Mandy has done 65 bounces. Plot this on the graph.

Use the graph to estimate the number of bounces Mandy has done after 35 seconds.

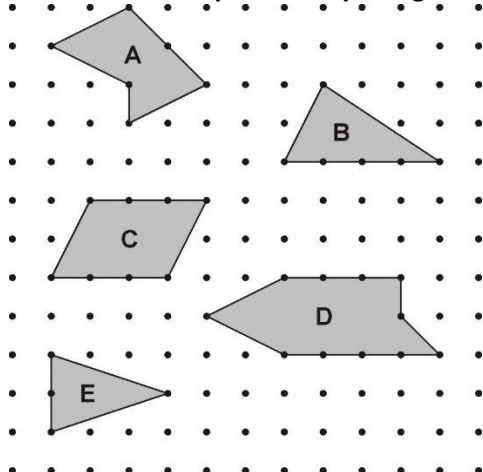**Here are four triangles drawn on a square grid.**

Write the letter for each triangle in the correct region of the sorting diagram. One has been done for you.

	has a **right** angle	has an **obtuse** angle	has 3 **acute** angles
is isosceles	A		
is **not** isosceles			

Here are five shapes on a square grid.

Write in the missing letters.
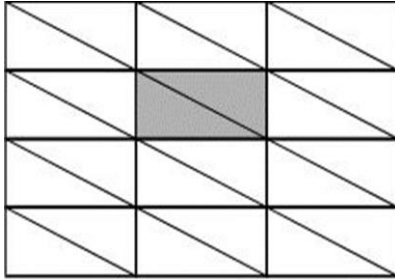
Shape _____ has two pairs of parallel sides.

Shape _____ is a pentagon.
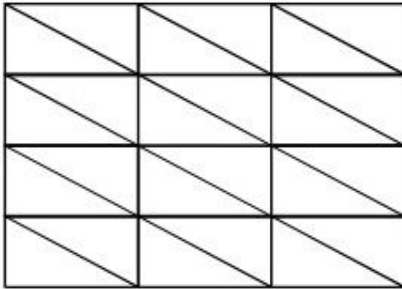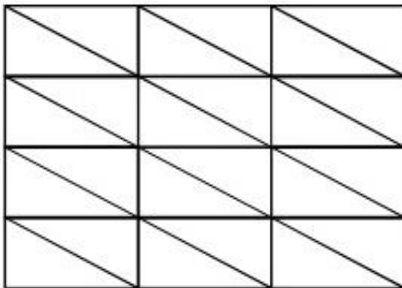
Shape _____ has reflective symmetry.

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Mike has a triangle grid.
He shades in 2 triangles to make a shape with
4 sides.

Shade in 2 triangles on this grid to make a
different shape with 4 sides.

Shade in 4 small triangles on this grid to make
a bigger triangle.

Shade in <u>more</u> than 4 small triangles on this
grid to make a bigger triangle.