11+ MATHS EXAM QUESTIONS

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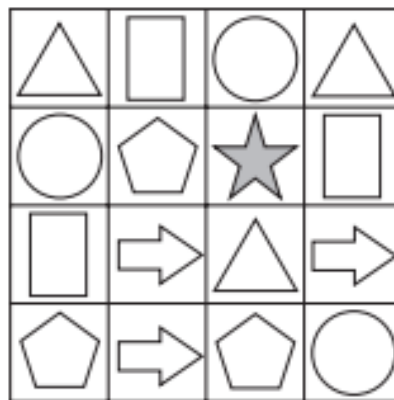11 + Practice Papers
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Q1.

Which of the following is the most likely weight of a bag of sugar?

a) 1 g
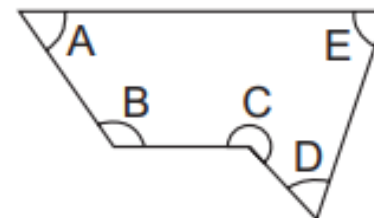
b) 1 litre

c) 1000 kg

d) 100 mm

e) 1 kg

Q2.

Look at the grid. James starts at the star. He moves 1 square south-west, 2 squares north and 2 squares east.
What shape will he arrive at?

a) Pentagon

b) Triangle

c) Circle

d) Rectangle

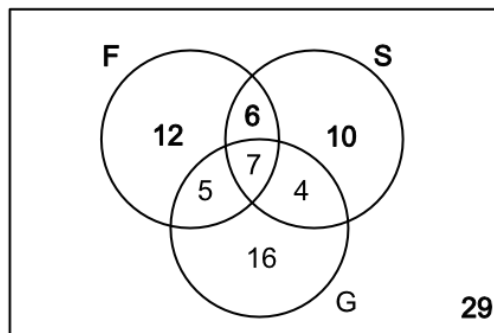e) Arrow

Q3.

Which letter represents a reflex angle?

Q4.

Which of these numbers is the smallest?

a) 7.7

b) 7.07

c) 77.0

d) 0.7

e) 0.77

Q5.

The Venn diagram shows students that are studying a French, German and Spanish.

How many children study German and Spanish, but not French?

Q6.

TRAIN TIMETABLE

Newport	06:35	06:43	07:12	08:25	09:00	09:19
Severn Tunnel Jn	07:00	07:25	07:41	08:55	09:19	09:53
Caldicot	07:11	07:41	07:51	09:04	09:31	10:02
Chepstow	07:18	07:52	07:59	09:11	09:38	10:11

Look at the train timetable. Gemma lives in Newport. She wants to arrive at Caldicot before 08:30
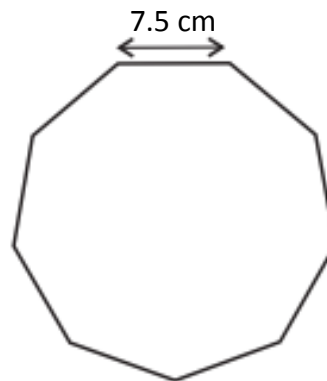What time should she catch the train from Newport?

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Q7.

How many quarters are there in 6?

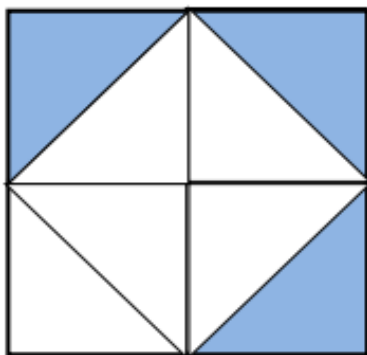**Q8.**

Work out the perimeter.

7.5 cm

Q9.

Fifty-eight thousand, six hundred and eighty-three people went to a football match. What is this number rounded to the nearest thousand?

Q10.

There are 32 DVDs in a box. A shop orders 14 boxes. How many DVDs did the shop order?
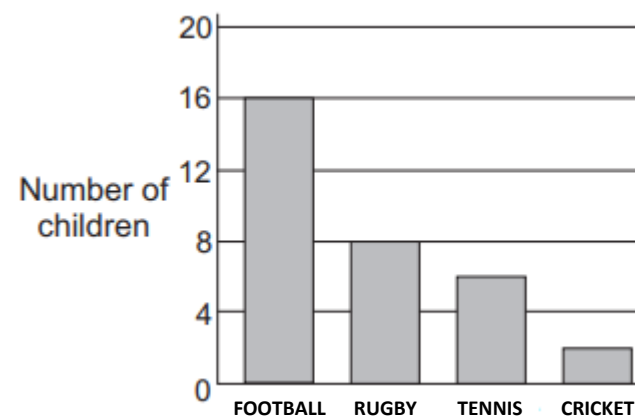
Q11.

What fraction of the shape is shaded?

Q12.

A class of children were asked about their favourite sport. The results are shown by this bar chart.

25% of children said they liked Rugby. What percentage chose Football?

Number of children

FOOTBALL   RUGBY   TENNIS   CRICKET

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Q13.

Which of the following statements is correct?

a) $63 > 630 \div 100$

b) $63 \times 10 < 63$

c) $630 < 63$

d) $6.3 \times 10 < 63$

e) $63 > 6300$

Q14.

A factory makes 5704 items in a week.

2889 of the items are sold.

How many items are left over?

Q15.

Sanjay is trying to work out the volume of a water tank. What units should he measure the volume in?

a) mm^3

b) m^2

c) cm^2

d) m^3

e) cm^3

Q16.

How many cm^3 are there in 6.5 litres?

Q17.

Sara has 92 pens and she ties them into bundles of 8.

How many pens does she have left over?

Q18.

What is 72.3×8.4?

Q19.

Write down all numbers which are prime **and** factors of 40.

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Q20.

What is $\frac{3}{5}$ of 60?

Q21.

7.6   7.7
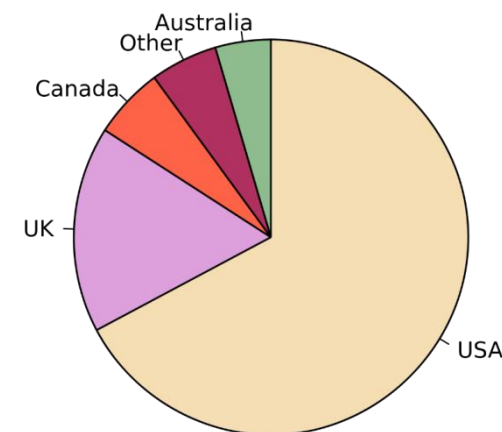
Find the missing number on the number line.

Q22.

Write down the modal country from the pie chart below:

Q23.

Which of these calculations gives the largest amount?

a) $31 \times 30 - 18 + 19$

b) $18 \times 19 - 31 + 30$

c) $30 \times 18 - 19 + 31$

d) $31 \times 18 - 30 + 19$

e) $30 \times 19 - 31 + 18$

Q24.

What is the next number in this sequence?

28, 41, 54, 67, ...

Q25.

Mark buys a mug, two balls and a toy from a sports shop. How much change does he receive from £20.00?

Item	Cost
Mug	£2.99
Ball	£6.99
Picture	£1.99
Toy	99p

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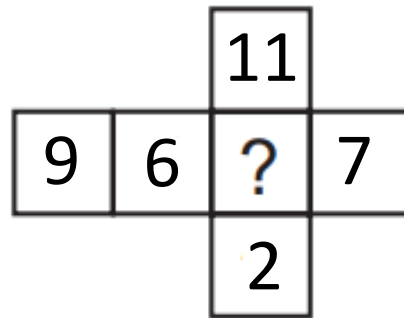
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Q26.

$722 \times 330 = 238260$

What is 722×165?

Q27.

When this net is folded into a cube the opposite faces of the cube add up to 13 What is the missing number?

	11	
9	6	?	7
	2	

Q28.

Hayden measured the height of his front door. It was 2.235 m tall. What is 2.235 m rounded to the nearest 10 cm?

Q29.

The average temperature in April is 21°C.
The average temperature in December is a third of the average temperature in April.
The average temperature in September is twice the average temperature in December.

What is the average temperature in September?

Q30.

What is the sum of the factors of 18?

Q31.

Shania has 3 pieces of string. One piece is 180 mm long, another piece is 34 cm long and the last piece is 0.57 m long. What is the total length of string in centimetres?

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Q32.

Five muffins cost £2.65 and three coffees cost £3.21 What is the total cost of one muffin and one coffee?
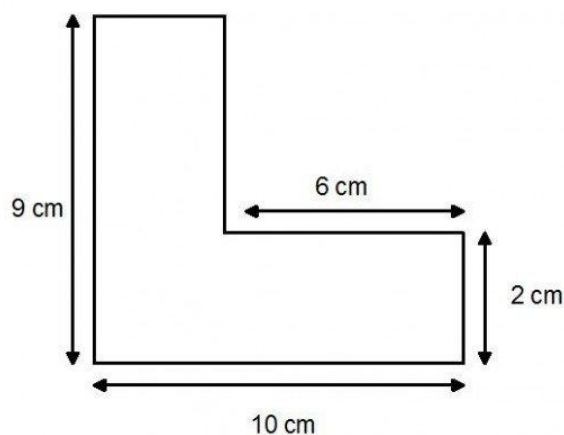
Q33.

Alex weighs 81.2 kg, Katie weighs 63.8 kg and Coby weighs 69.4 kg. What is the range of their weights?

Q34.

Rowan has 18 cards. 3 of his cards are queens. Sophie takes a card at random from Rowan. What is the probability that Sophie does not take a queen?

Q35.

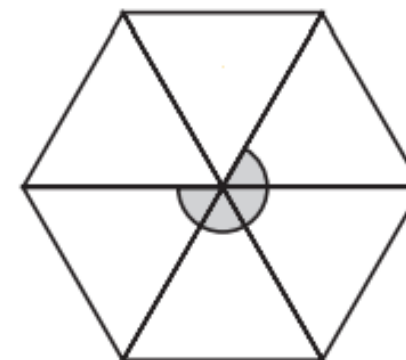Work out the area of the compound shape below:

9 cm
6 cm
2 cm
10 cm

Q36.

Roger is building a model ship. He uses 64 pieces of wood which weigh 52 g each. What is the total weight, in kilograms, of the wood used in the model ship?
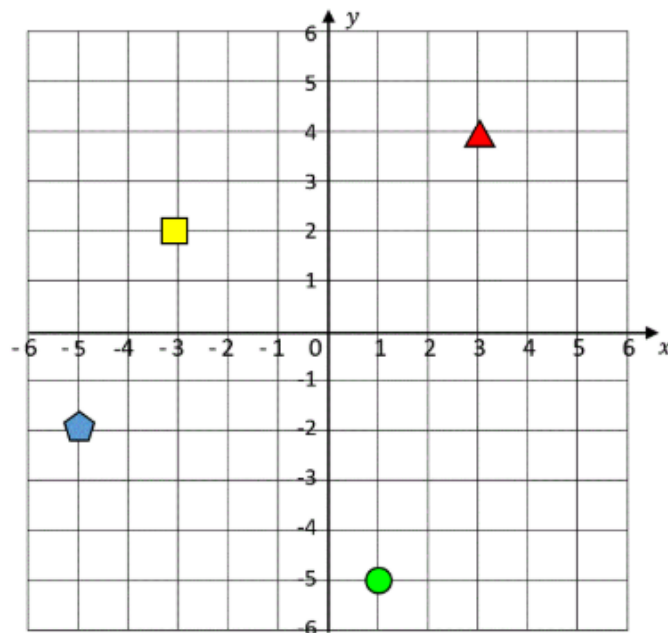
Q37.

The hexagon below is made up of equilateral triangles. What is the value of the angle marked?

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Q38.

Write down the co-ordinates

for the four shapes on the grid.

Q39.

Which of the following statements is true?

a) Most prime numbers end in 5.

b) 2 is not a prime number.

c) Prime numbers only have two factors.

d) 1 is a prime number.

e) All prime numbers are odd.

Q40.

Both of these cuboids are identical. Each of their square ends

has an area of 6 cm² and they are both 15 cm long. What is the

total volume of these two cuboids combined?
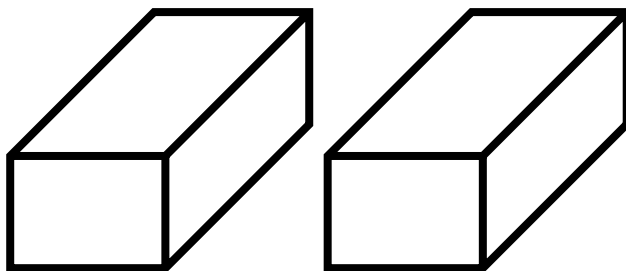
Q41.

Susan keeps some animals on her farm.
She has 8 sheep, 14 cows, 26 chickens
and 4 pigs. Susan sells 2 of her cows.

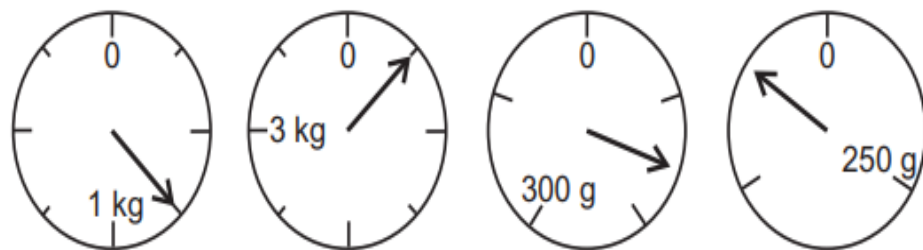What percentage of her remaining
animals are cows?

Q42.

Work out the mean of the temperatures
from the table below:

Day	Temperature (°C)
Monday	4
Tuesday	7
Wednesday	11
Thursday	8
Friday	12
Saturday	9
Sunday	5

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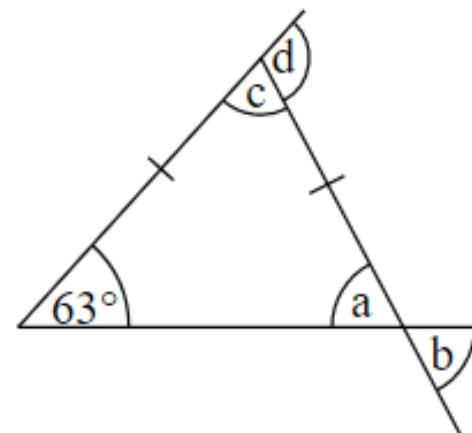
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Q43.

Mark on the values on the dials below:

Q44.

Work out the missing angles a, b, c and d below:

Q45.

A bucket holds 4 litres of water. 125 ml of water is drained from the bucket every minute. How many minutes will it take for the bucket to be empty?
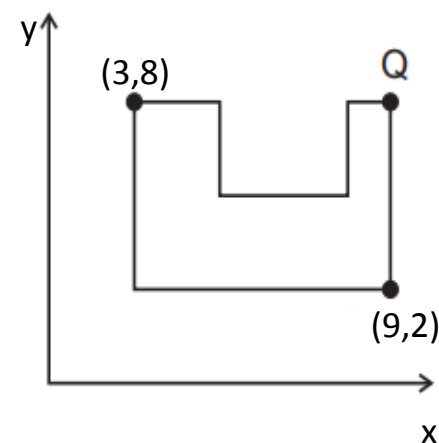
Q46.

Zoe has 5 dogs. She has to buy each dog a collar (c) and three tins (t) of dog food.

Write an expression to show how many collars and tins of food she needs to buy?

Q47.

Write down the co-ordinates of Q.

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Q48.

Daniel has a bag of counters. 6 are green, 8 are yellow and 4 are blue. He picks a counter at random.

What is the probability that he picks one that is not green?

Q49.

Skye works for a bookshop. She is paid £8.50 an hour plus 5% of the cost of each book she sells. On Friday, Sky worked for 3 hours and sold £120 worth of books. How much money did Skye earn?

Q50.

The cost of travel insurance in pounds (C) is worked out using the equation below:

$$C = 30 + 20(x - 1)$$

x is the number of weeks that a customer is travelling for. A customer wants travel insurance for 8 weeks.

How much should the customer be charged?

Q51.

What type of numbers are represented by the sequence below:

1, 4, 9, 16, 25, 36, 49, ...

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Q52.

If you need 7 pears to make a crumble, how many crumbles can be made with 123 pears?

Q53.

In a Magic Square the rows, columns and diagonals all add up to the same number. Fill in the magic square below.

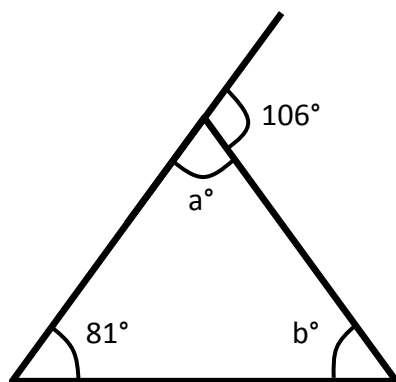| 5		
	6	2
		7

Q54.

In the number 69581, what is the value of the digit 9?

Q55.

A metal pole is 5 m 7 cm long. It is cut into three equal pieces. How long is each piece in centimetres?

Q56.

Work out the missing angles a and b below:

106°

a°

81°   b°

Q57.

Elle is drawing a plan of her house. Her scale is 4 cm to 5 m. The garden is 12.5 m long. How long is the garden on her plan?

Q58.

Steve thought of a number. He halved it, then added 8. The answer was 40. What number did Steve think of?

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Q59.

What is the Lowest Common Multiple (LCM) of 12 and 18?

Q60.

A holiday costs £420 for an adult. It is £130 less for a child. How much is it for two adults and four children to go?

Q61.

Place these decimals in ascending order.

6.03, 6.5, 6.1, 6.009 6.09

Q62.

Solve the equation:

$$5a + 5 = 61 - 2a$$

Q63.

There are 36 pupils in a class. $\frac{1}{6}$ travel to school by cycle. $\frac{1}{4}$ travel by car. $\frac{5}{12}$ travel by bus. The rest walk to school. How many students walk to school?

Q64.

Here are some scores in a test:

12, 17, 8, 2, 7, 14, 3

What is the mean?

Q65.

Simplify the ratio 36 : 54

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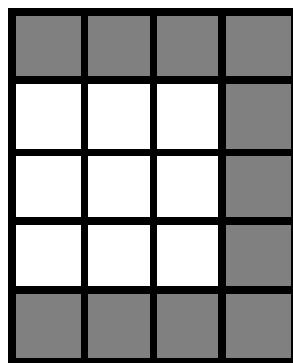*Give your child the best!*

Q66.

What is 5.637951 to two decimal places?

Q67.

What percentage of the shape is shaded?

Q68.

Amy spends £3.50 on her lunch at school each weekday. How much does she spend in a week?

Q69.

Work out 2^3

Q70.

Derek earns £1800 a month. The pie chart below shows how his wages are spent. How much money did Derek spend in total on Clothes, Bills and Savings?

Rent 25%
Car 20%
Bills 15%
Miscellaneous 5%
Entertainment 5%
Clothes 5%
Food 10%
Savings 15%
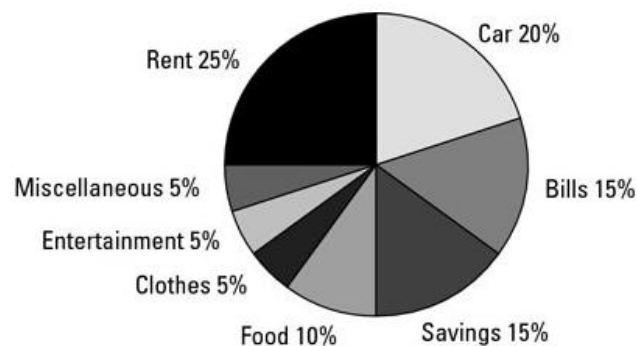
Q71.

Write these fractions in descending order:

$$\frac{19}{24} \qquad \frac{9}{12} \qquad \frac{2}{3} \qquad \frac{5}{6} \qquad \frac{7}{8}$$

Q72.

Here are five scores in a cricket match:

14 , 24 , s , 54 , 9

The mean score was 30.
What is the value of s?

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Q73.

$a = \dfrac{2}{3}$ of b

Write the equation of b in terms of a

Q74.

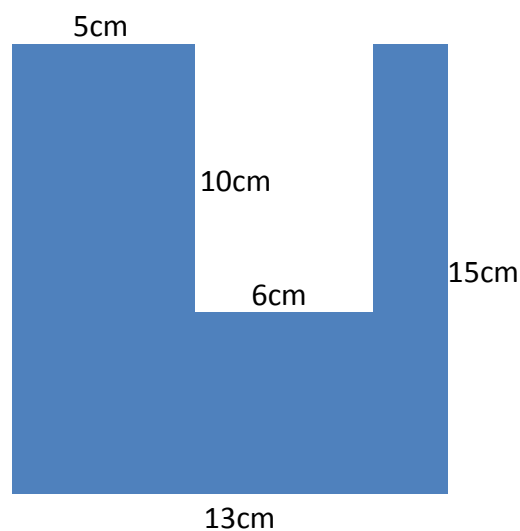Talal will be c years old in three years time. How old was he seven years ago in terms of c?

Q75.

There are 360 cars in the car park. $\dfrac{1}{3}$ are blue. $\dfrac{5}{12}$ are black. The rest are red. How many red cars are there?

Q76.

There are 200 sweets in a box. How many sweets are there in 5.5 boxes?

Q77.

Work out the area of the shape below:

5cm

10cm

6cm

15cm

13cm

Q78.

Circle the number that has the closest value to 3?

$2\dfrac{21}{25}$ 282.8%   2.83   282.9% $2\dfrac{43}{50}$

Q79.

What fraction is 60 cm of 5.8 m?

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Q80.

Ray is half as old as his sister. In eight years time she will be 32. How old is Ray?

Q81.

How should the time 4.45 in the afternoon be written?

Q82.

A door is 5 feet 10 inches high. What is the approximate height in metres?

Q83.

If it is a cold rainy day then I wear a raincoat. If it is a warm rainy day then I carry an umbrella. If I wear my raincoat then I also wear either gloves or a hat but not both.
If I carry an umbrella I always wear gloves and sometimes wear my hat as well. I never carry an umbrella and wear my raincoat on the same day. For each of the following, state whether it is definitely true, false or uncertain.

It is a warm rainy day. I wear my raincoat and a hat.

It is a warm rainy day. I carry my umbrella and wear a hat but no gloves.

It is a cold rainy day. I wear my raincoat, hat and no gloves.

Q84.

Sharon has a bag of balls containing 7 blue, 8 red and 3 black. She takes out 2 balls at random and does not replace them. They are both red. What fraction of the balls left in the bag are red?

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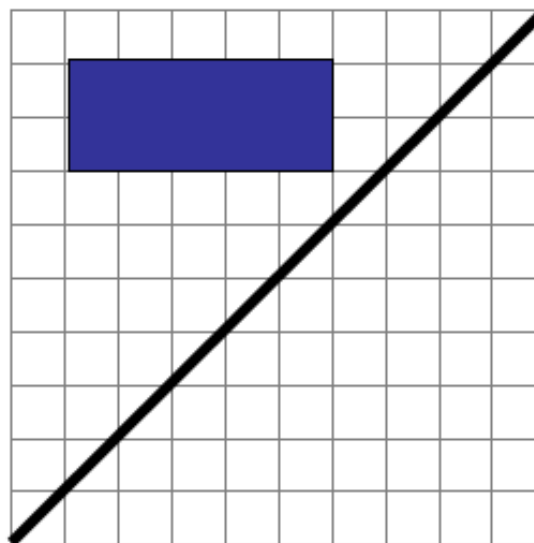11 + Practice Papers
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Q85.

Reflect the shape in the mirror line.
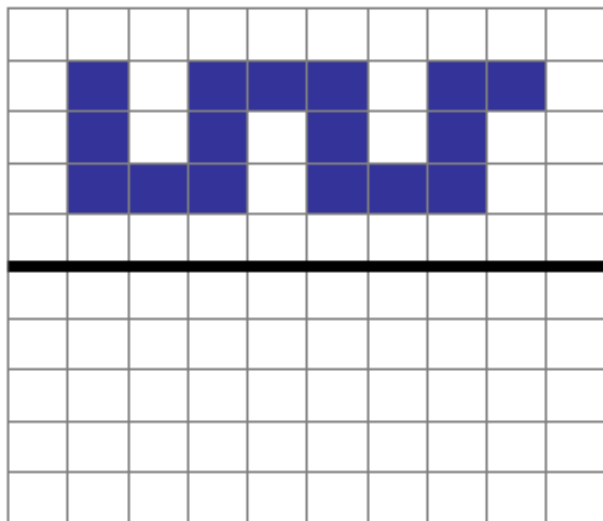
Q86.

Reflect the shape in the mirror line.

Q87.

Dave, Megan and Jemma are given £2500 by their aunt. They are told to share it in a 6:3:1 ratio. How much money will Dave receive?

Q88.

Look at the pictogram:

(a)   How many children were asked altogether?

(b)   How many more children chose Basketball over Swimming?

= 2 children

Football	△ △ △ △ △
Tennis	△ △
Basketball	△ △ △
Hockey	△ △ △ △
Swimming	△

Q89.

Which of these calculations will give an odd number as the answer?

a) 223×135

b) 156×623

c) 438×812

d) $345 + 289$

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Q90.

The arrow on the spinner is pointing at number 1. Zak spins the arrow round 225° anti-clockwise. Which number is the arrow pointing to now?
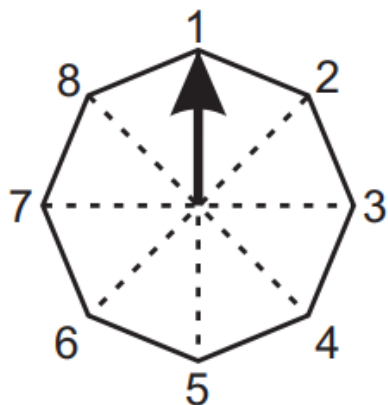
Q91.

Jake is running from Halifax to London and back again. The distance is 205 miles one way. If he runs 5 miles a day, how many days will it take him to run the distance?

Q92.

40 people were asked what colour their car was. 16 people said white. What percentage of people did not say white?

Q93.

The diagram shows a rectangular flag. It is split into four equal rectangles.

3cm

8cm
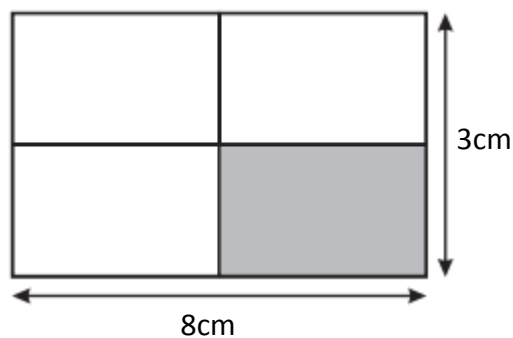
What is the area shaded?

Q94.

Jai has a drawer containing 36 socks. $\frac{5}{9}$ of them are black socks and the rest are white. How many white socks are in the drawer?

Q95.

Work out the nth term of this sequence?

$-3 , -1 , 1 , 3$

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Q96.

55% of students in a school are boys and 45% of students in a school are girls. Write the ratio of boys to girls in its simplest form.

Q97.

Concert Tickets
Adults £4.50
Children £2.50
30% discount for a family ticket
(2 adults and 2 children)

What is the cost of a family ticket?

Q98.

Antonia is hosting a party for 28 children and 9 adults. Antonia buys 3 scotch eggs for each child and 5 scotch eggs for each adult. If the scotch eggs come in packets of 25, how many packets will Antonia need to buy?

Q99.

A plant grows 0.025 metres every 6 months. It is 1.5 metres tall. How many years will it take to reach 1.8 metres?

Q100.

The total perimeter is 30 metres. What is the length of x?
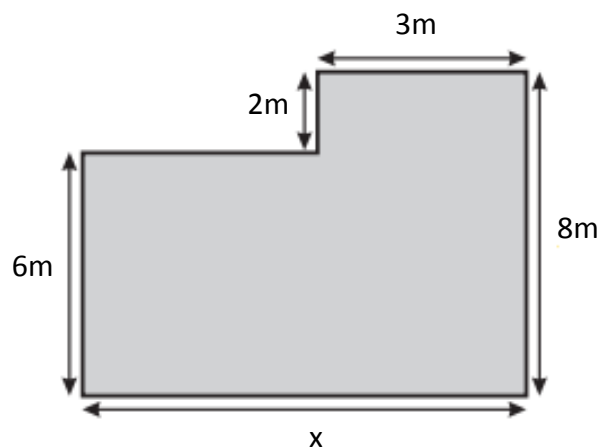
Q101.

Bernie uses 9 litres of red paint, 2 litres of blue paint and 1 litre of white paint to paint the rooms in her house. What percentage of the paint is red?

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Q102.

The nth term of a sequence is $3n^2 + 1$.
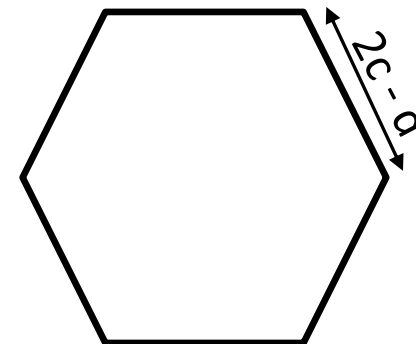
What are the first three terms of the sequence?

Q103.

Gina has 5 cubes of cheese with sides of 2cm. A mouse eats 28cm³ of the cheese. What volume of cheese does Gina have left?

Q104.

Work out the perimeter of the hexagon below:

2c - d

Q105.

A barrel contains 4 litres of water. There are 5 holes in the bottom of the barrel and each hole loses 50 ml of water each hour. How many hours will it take for the barrel to completely empty?

Q106.

Ady is 4 years younger than John. John is 9 years older than George. How much older is Ady than George?

Q107.

What is the missing number in this equation?

$2808 + 2808 + 2808 = \boxed{} \times 8$

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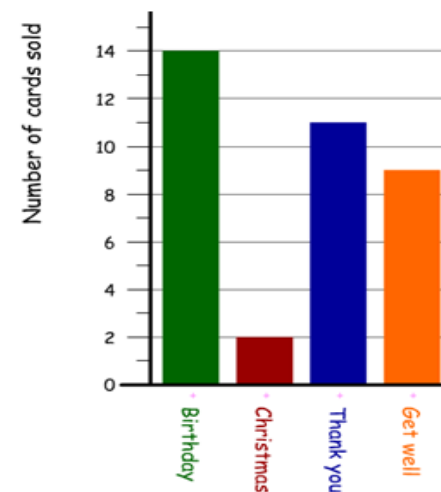Give your child the best!

Q108.

A bag of crisps costs 99p. How much will 7 bags of crisps cost?

Q109.

86 children want to go camping. 6 children can sleep in each tent. How many tents do they need?

Q110.

How many more birthday cards were sold in comparison to get well cards?

Q111.

What is 14 – 6.71?

Q112.

What is 69.952 rounded to the nearest tenth?

Q113.

Fill in the two way table below:

	English	Maths	Science	Total
Girls	20	13		50
Boys		15		
Total	38		40	

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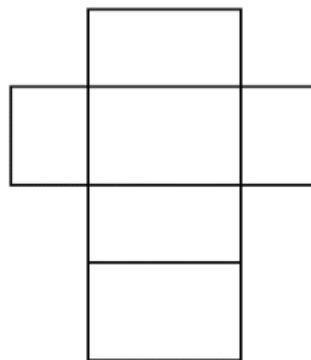Give your child the best!

Q114.

James has 3.6 litres of apple juice, 800 millilitres of pineapple juice and 0.09 litres of orange juice. He mixes them together in a bucket. How many litres of liquid is in the bucket?

Q115.

This is a net of a solid. What is the name of the solid?

Q116.

The table shows information written on a tin of fruit. Grace eats 3 tins of fruit. How many grams of fibre did Grace eat?

	Per ½ tin
Protein	0.9g
Carbohydrate	24.6g
Fat	0.3g
Fibre	2.6g

Q117.

Lucy collects books. 5 out of every 9 of her books are fiction. The rest are non-fiction. Lucy has 20 fiction. How many books does she have in total?
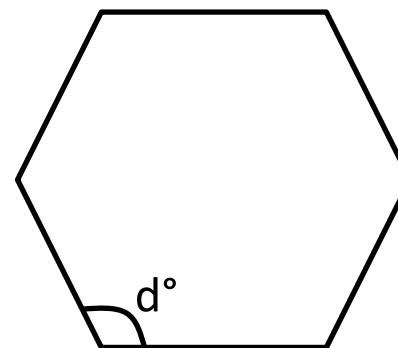
Q118.

Which of the following is equal to 24?

A) $48 - 8 \times 3$

B) $2 + 4 \times 4$

Q119.

Work out the interior angle (d) in the regular hexagon below:

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Q120.

Which quadrilateral has all equal sides but is not a square?
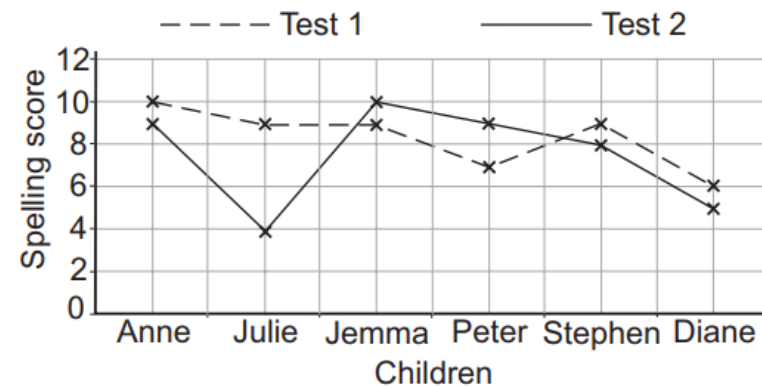

Q121.

Here are the shoe sizes of the children at a party.

$$5 , 7 , 4 , 9 , 6 , 6 , 8 , 7 , 4$$

What is the mean shoe size?
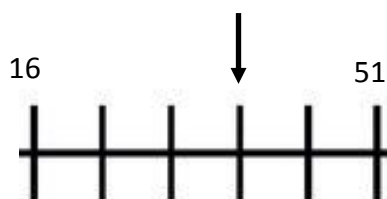

Q122.

What was the difference in marks for Julie over the two tests?

Q123.

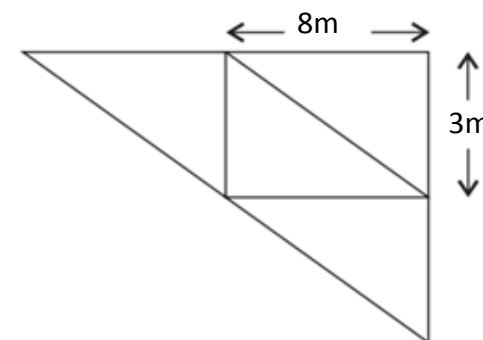What number is the arrow pointing to?

16   51

Q124.

Jimmy thinks of a number. He multiplies it by 9, subtracts 8 and then divides it by 2. He ends up with 68. What was the number he started with?

Q125.

Four congruent right-angled triangles make up this shape. What is the area of the full the full shape?

8m

3m

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Q126.

Maxwell has some pocket money. He spends 60% of it and is left with £6.00. How much money did he have to begin with?

Q127.

A tap is dripping water at a rate of 25 ml per minute. How long will it take, to the nearest minute, for 3 litres of water to be leaked from the tap?

Q128.

This honeycomb pattern is made up of regular hexagons. The length of each side of the hexagons is 4cm. Calculate the distance around the outer edge of this shape.
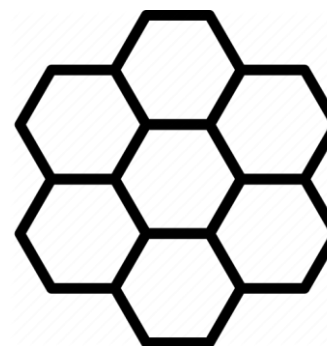
Q129.

On Tuesday the temperature is 1°C.
By Wednesday it has dropped to −4°C.
The temperature drops by twice as much from Wednesday to Thursday. What is the temperature on Thursday?

Q130.

Jeremy raised £850 from a sponsored bike ride. He divides it in the ratio 7:3 and donates each amount to a different charity. What is the difference between the larger donation and the smaller one?

Q131.

Here are the ingredients needed to make 16 gingerbread men.

Ingredients to make 16 gingerbread men	
180 g	flour
40 g	ginger
110 g	butter
30 g	sugar

Hamish wants to make 24 gingerbread men. Work out how much of each of the ingredients he needs.

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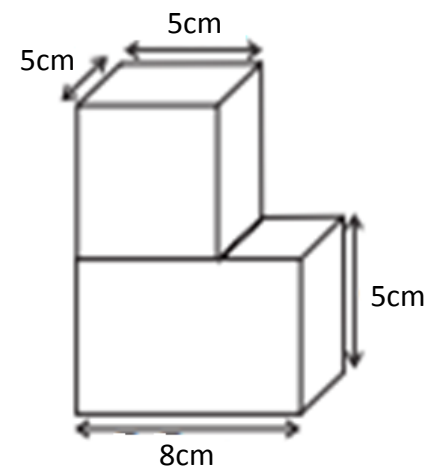
Q132.

What is the nth term of this sequence?

5 , 1 , -3 , -7 , …..

Q133.

Amy starts out on a 195 km journey at 8:55 am. She travels on average at 60 km per hour. What time does she arrive at her destination?

Q134.

The picture shows a cube on top of a cuboid. What is the total volume of the shapes?

5cm

5cm

5cm

8cm

Q135.

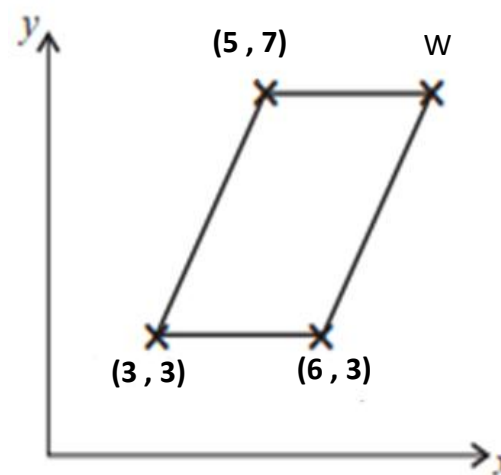Write $\frac{18}{60}$ as a percentage

Q136.

Eric works in a games shop and is given a discount card.

Eric uses his card to buy a game for £24.75
The game originally cost £27.50

What discount does he receive?

Q137.

Work out the co-ordinates of W for the parallelogram below:

(5 , 7)   W

(3 , 3)   (6 , 3)

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Q138.

A repair engineer charges a customer £40 for every job and £22 for every hour that he works. Write a formula that he could use to find how much he charges, C, for h hours of work?

Q139.

A shop has an offer on boxes of chocolate. You can buy 3 boxes of 20 chocolates for the price of 2. A box costs £4.80. Millie buys 6 boxes in the offer. She also buys a box of 12 chocolates for £3.10. How much does she spend in total?

Q142.

Jamie is looking at a set of number cards.

17	25	27	37
16	36	31	64

(a) Which two numbers have a difference of 21?

(b) What is the largest total that can be made by adding three cards?

Q140.

Work out:

$$5(9 - 3 \times 2)$$

Q141.

What number must be added to 2.361 to make 10?

(c) Which three cards add to make 107?

(d) Which number is the largest multiple of 3?

(e) What is the range of the prime number cards?

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Q143.

What is the difference between 7.9 and 18.265?

Q144.

Simplify the ratio 40g : 1kg

Q147.

Helena asked the students in her class how they travelled to school. This is shown in the bar chart:

4 students travel to school by car.
7 students travel to school by bus.

(a)   Complete Helena's bar chart.

(b)   How many students cycle to school?

(c)   Which method of travelling is used by the greatest number of students?

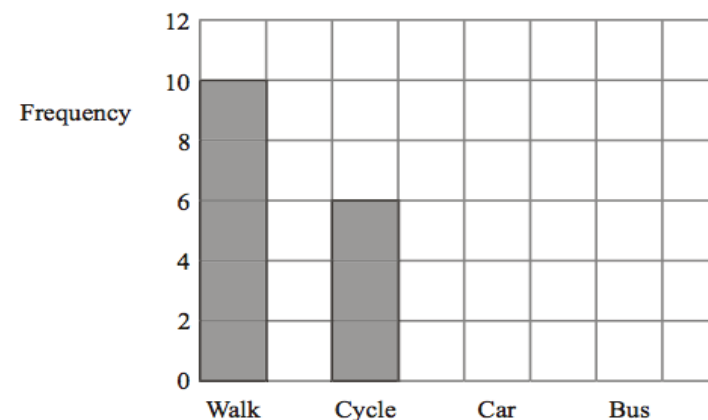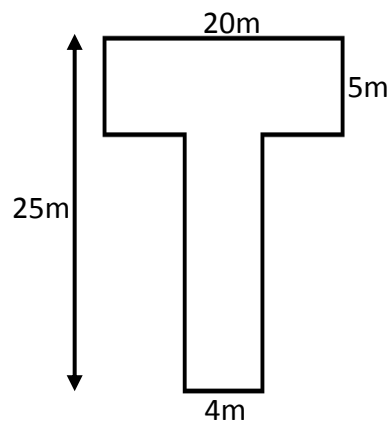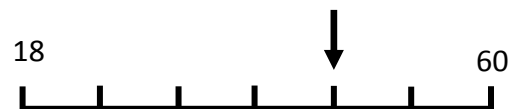(d)   Work out the total number of students Helena asked.

Q145.

Ady is 4 years younger than John. John is 9 years older than George. How much older is Ady than George?

Q146.

Work out:

35% of £80

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Q148.

Work out the area and perimeter below:
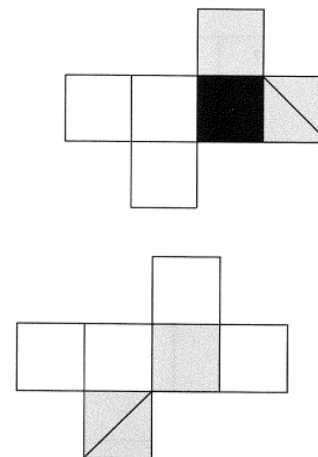
20m

5m

25m

4m

Q149.

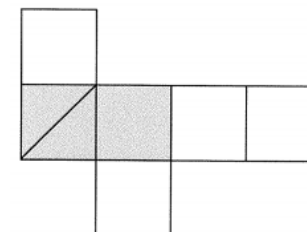Work out the value of the arrow:

18   60

Q152.

In each part of the question below, mark the square on the net that needs to be shaded black to make the same cube as shown.

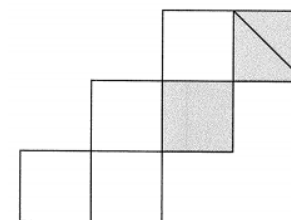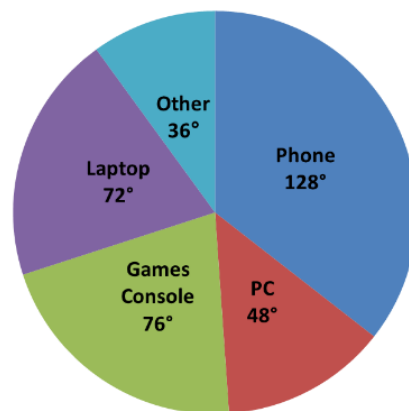**(a)**

Q150.

Devante has raisin bars and nut bars. Each raisin bar is 14p more than a nut bar. Eight raisin bars and six nut bars cost £9.24

How much does a raisin bar cost and how much does a nut bar cost?

Q151.

The pie chart shows results of a survey of 90 people. How many people chose Laptop?

Other
36°

Laptop
72°

Phone
128°

Games
Console
76°

PC
48°

(b)

(c)

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Q153.

Insert the correct symbols: ( ) , + , - , x , ÷

to make the calculation correct.

$$5 \quad 4 \quad 14 \quad 2 \ = \ 13$$

Q154.

Look at the line below and work out the value for b.
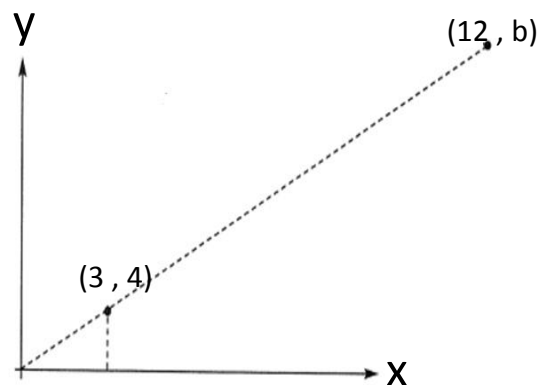
Q157.

Work out the missing terms in the sequence:

……….. , 8030 , 803 , ……….. , 8.03, ………..

Q158.

Work out: $\dfrac{14 + 3 \times (9 + 3)}{6 \times 4 + 1}$

Q155.

Three music lessons lasted for 1 hour and 45 minutes altogether. Each music lesson lasted for the same amount of time. How long was each music lesson?

Q156.

Hafsah thinks of a number. She doubles it and subtracts 19 from the result. She then has 7. What was Hafsah's original number?

Q159.

Josephine is one quarter the age of her father. Their ages total 60. How old is Josephine?

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Q160.

Add:

13.69 and 1563.789

Q161.

Simplify the ratio £5 : 80p

Q164.

Fill in the missing boxes below with the correct digits.

$$
\begin{array}{r}
2\ 4\ 9 \\
+\ 5\ \square\ 7 \\
\hline
7\ 8\ \square
\end{array}
$$

Q165.

A suit costing £84 is reduced in a sale by £16.80. What percentage discount is this?

Q163.

Adrian is planning to complete a sponsored walk for charity. The table below is a list of his sponsors.

Mum	10 pence for first mile, 20 pence for second mile, 30 pence for third mile and so on
Dad	£10
Grandma	£20
Grandad	£3 plus 25 pence per completed mile
Auntie	50 pence per completed mile

If Adrian completes 6 miles. How much money will he collect from everyone?
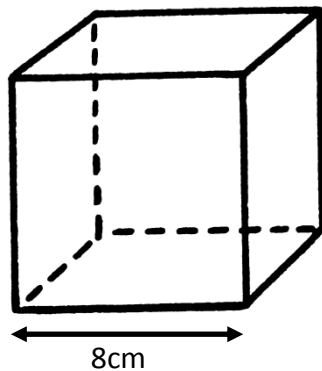
Q166.

Work out:

11.5% of £220

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Q167.

The cube below has edges of length 8 cm.

What is the total length of all the edges?

8cm

Q168.

How many more factors does 36 have over 24?

Q169.

Air Temperature in April

a) What was the air temperature on the 8th?

b) What was the range of air temperatures in April?

c) Did the temperature increase or decrease between April 8th and April 22nd?

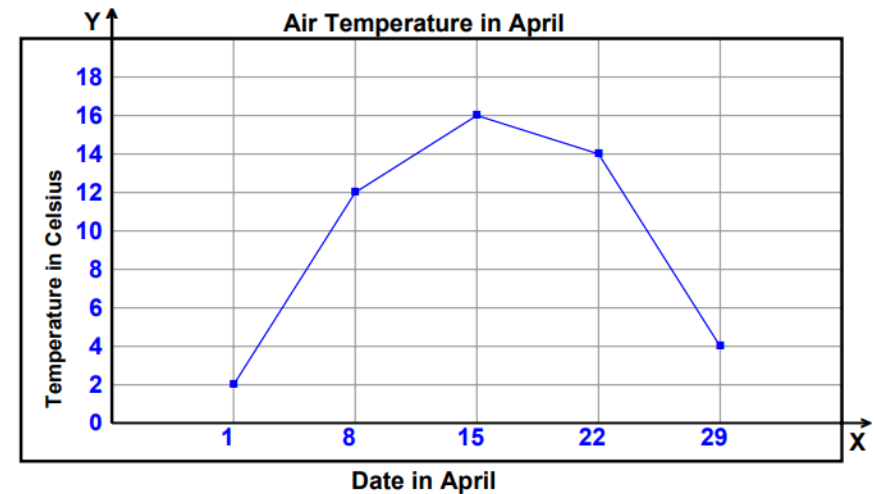d) On which date was the temperature at the highest?

Q170.

David cycles to and from school every day, each journey takes him seven minutes. How long does David spend cycling every week?

Q171.

Work out:

60316 ÷ 17

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Q172.

Work out the value of ? If:

25% of ? = 32

Q173.

Dilip is two years younger than Sabna, who is five years older than Amelia. Dilip's age and Amelia's age total 31. How old is Sabna?

Q174.

Which three square numbers add up to 66?

Q177.
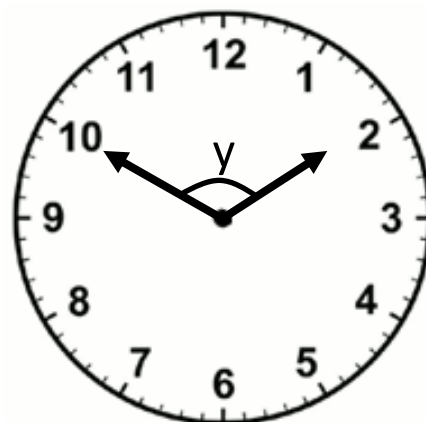
Calculate fourteen fifteenths of €105

Q175.

Fill in the magic square below:

		4
		3
6		8

Q176.

Work out angle y made by the clock.

Q178.

Fill in the missing boxes below with the correct digits.

```
    4  6  3
  -  2 ☐ 7
  ─────────
    ☐ 7 ☐
```

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Q179.

The table below shows the prices of items in a shop.

Medium card and envelope	£2.89
Large card and envelope	£3.69
Chocolates	£2.59
Perfume	£4.75
Personalised mug	£6.49

(a) What is the total cost of a medium card, chocolates and a personalised mug?

(b) How much change would you receive from £10 if you purchased a large card and perfume?

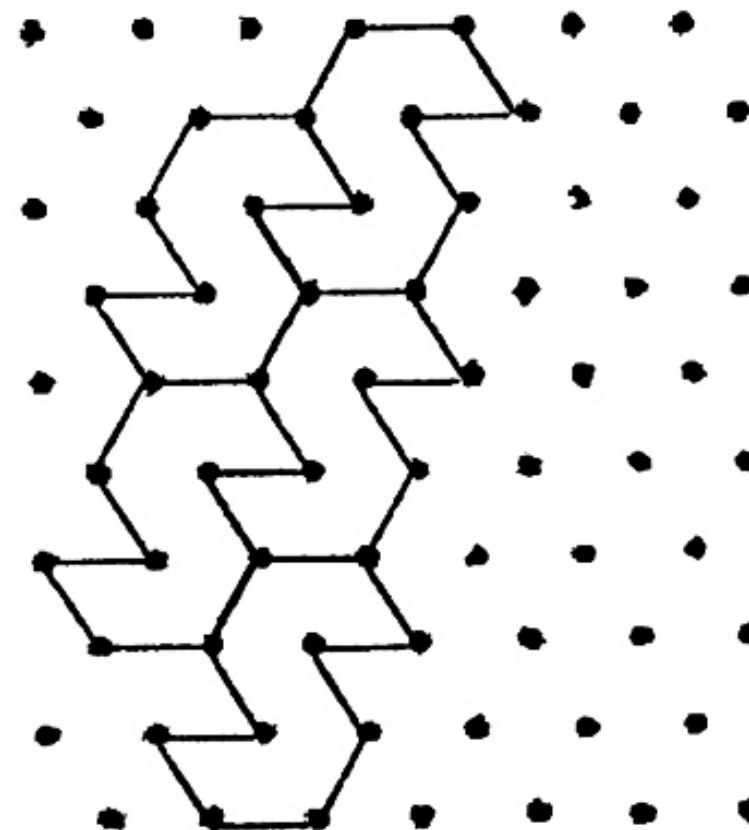(c) What three items cost £13.07 altogether?

Q180.

Which three consecutive prime numbers sum to 41?

Q182.

Divide 128 by 0.02

Q181.

Complete the tessellation by drawing three more of the 'S' shapes.

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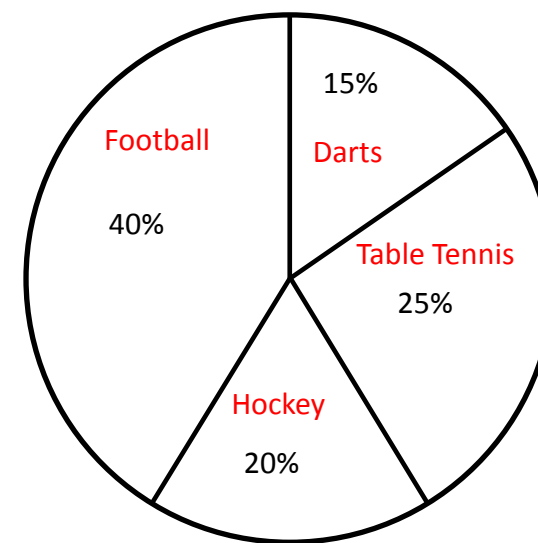
Q183.

Find the missing number which goes in the blank:

13 x 1 ☐ 1 = 1703

Q184.

Simplify the ratio 12 hours : 1 week

Q187.

The pie chart shows the results of a survey of 60 people.

Football 40%

Darts 15%

Table Tennis 25%

Hockey 20%

Q185.

How many square numbers are there between 101 and 200?

Q186.

$(3 \times 5^2 - 3) \div (3^2 + 3) \times 2^2$

a)   How many people chose darts?

b)   How many more members chose Table Tennis over Hockey?

c)   Show that 7/20 of the people surveyed chose Hockey and Darts.

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Q188.

Dory, the owner of Dory's Cookie Jar, has to bake 14 large pans of chocolate chip cookies before she leaves for the day. She can bake two pans of cookies at a time. Dory knows that for perfect cookies each pan must bake for 15 minutes -- no more, no less. If she starts baking at 5:45 p.m., what is the earliest she can close up shop?
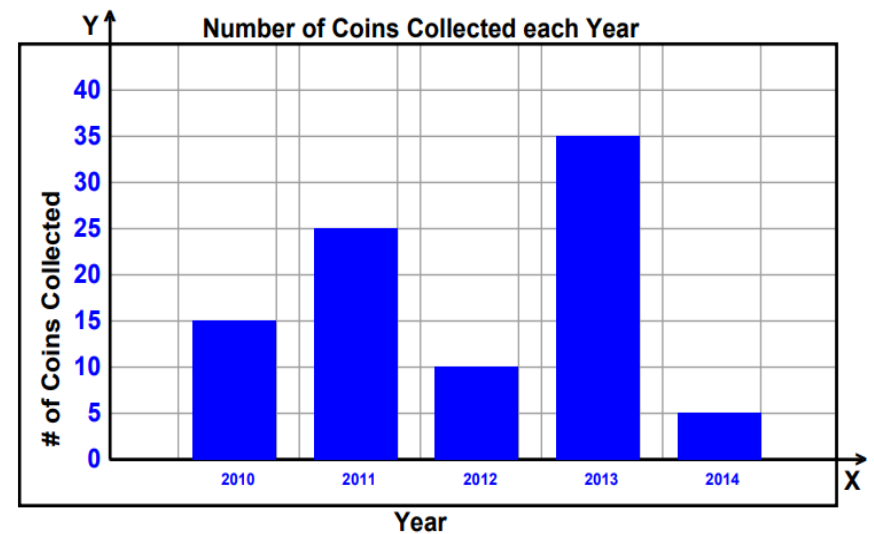
Q189.

Insert brackets to make the calculation correct.

$$16 + 4 \times 2 \div 5 = 8$$

Q190.

Georgie thinks of a number. She finds one third of it and adds 13 to the result. She then has 39. What was Georgie's original number?

Q191.

Number of Coins Collected each Year

(a) How many more coins were collected in 2013 compared to 2010?

(b) What was the mode year of coins collected?

(c) What was the range of coins collected?

(d) How many coins were collected altogether?

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Q192.

Fill in the missing boxes below with the correct digits.

$$1 \boxed{} \; 6$$
$$\times \qquad 8$$
$$\boxed{} \; 4 \; 8$$

Q193.

Work out:

17.3 x 2.5

[ ]

Q194.

Work out the missing terms in the sequence:

……….. , 0.42 , 8.4 , ………..

Q195.

Victor walks an average speed of 4 km/h.
He needs to walk to school which is 3 km away.
He needs to be there at 3pm what time should he set off?

[ ]

Q196.

Most Purchased Food
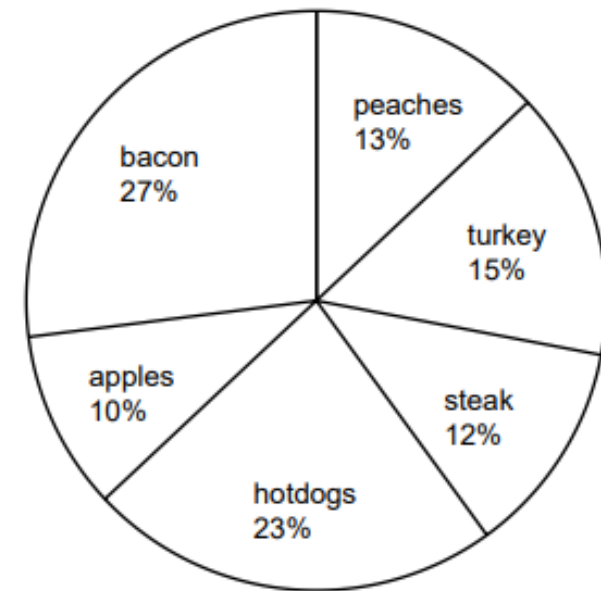
(a)   What percentage of customers purchased hotdogs, turkey and bacon?

(b)   What two foods accounted for a quarter of the purchases?

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Q197.

Fill in the missing boxes below with the correct digits.

8 1 ▢ ÷ 45 = ▢ 8

Q198.

Work out:

$$6 - 4 \times 3^3 + 7$$

Q199.

Work out:

839 - 1846

Q202.

A killer shark, attacking a fishing boat, swims at a speed of 14m/s for half a minute.
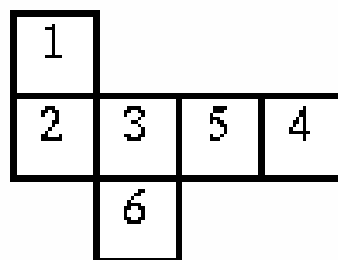
How far does it swim in this time?

Q200.

Work out:

0.3 x 0.2

Q201.

What do the opposite faces in the net of cube add up to?

```
 ┌───┐
 │ 1 │
 ├───┼───┬───┬───┐
 │ 2 │ 3 │ 5 │ 4 │
 └───┼───┼───┴───┘
     │ 6 │
     └───┘
```

Q203.

If a man takes 30 minutes to drive to work and it is 44 miles into work, what is his average speed in mph?

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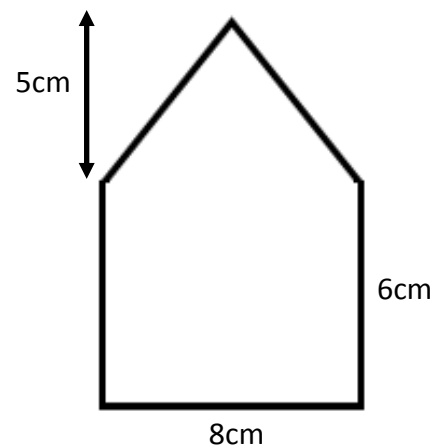
Q204.

There are errors in the calculations below. It can be corrected by changing one digit to the number 6. Identify the digit.

(a)   78 − 45 = 31
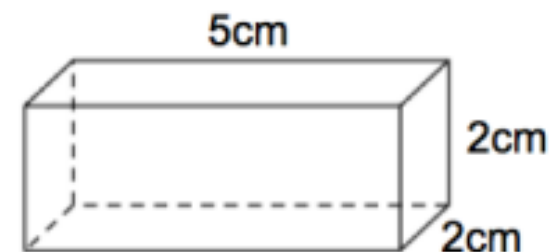
(b)   27 + 35 + 59 = 151

(c)   5 − 2 x 3 = -7
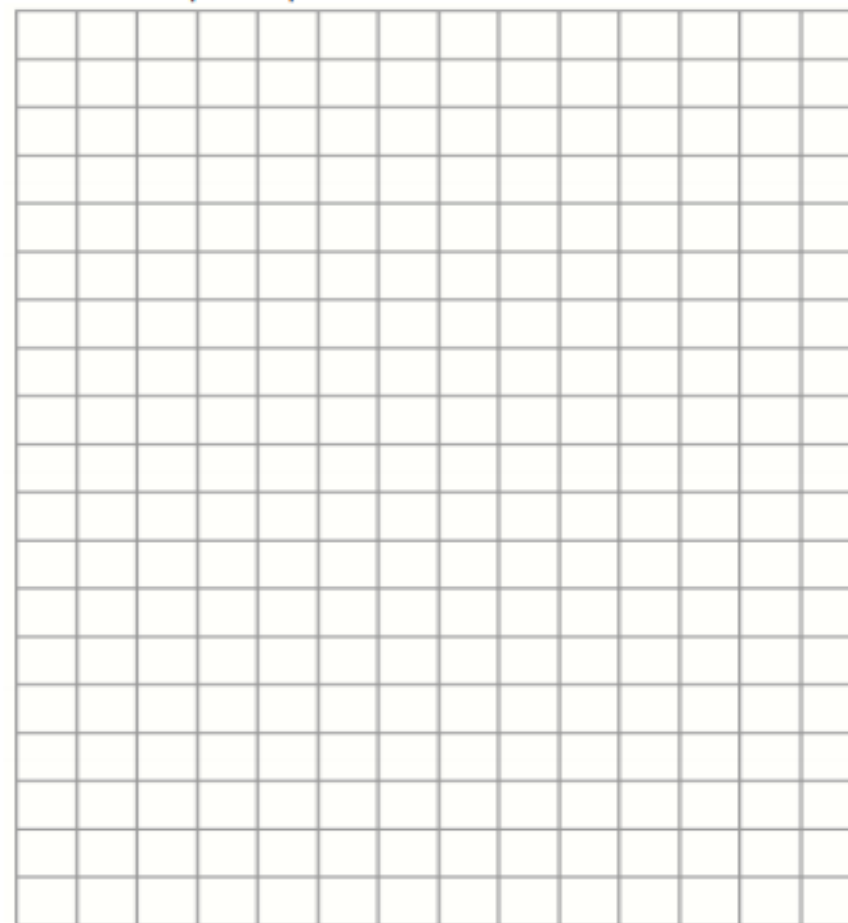
Q205.

Work out the area of the shape below:

5cm

6cm

8cm

Q208.

Shown below is a cuboid.

5cm

2cm

2cm
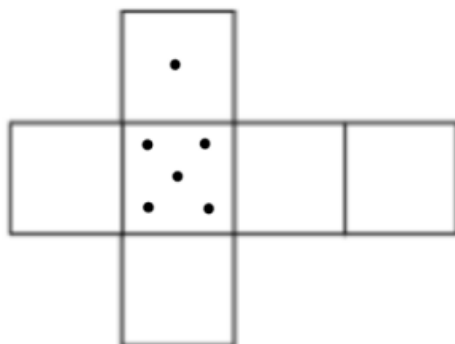
Draw a net for the cuboid. Each square represents 1cm²

Q206.

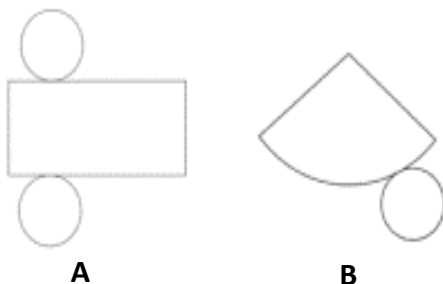The number of dots on the opposite faces add to 7. Fill in the missing faces.

Q207.

In this question letters of the alphabet are assigned number values: A = 1, B = 2, C = 3, D = 4, ... The sum total of a word is created by adding the value of the letters.

What is the value of the word MATHEMATICS?

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Q209.

Below are the nets of two solid shapes.

A   **B**

a) Write down the shape that is made from net A.

b) Write down the shape that is made from net B.
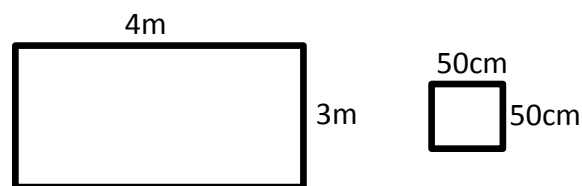
Q210.

James is completing a table of values for the formula 3(n + 2). He has completed the first row of the table.

n	3(n + 2)
4	18
17	
	60

Complete the table with the two missing values.

Q211.

4m

50cm

3m

50cm   50cm
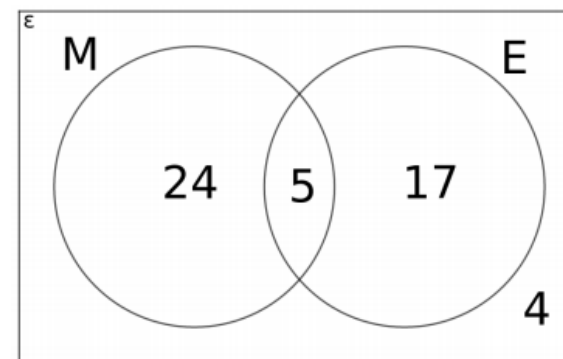
A rectangular floor measures 4 metres by 3 metres. How many 50cm by 50cm tiles are needed to cover the floor?

Q212.

Students were polled on their preference between Maths and English classes. The results are displayed in the Venn Diagram below.

ε

M   E

24   5   17

4

a) How many students chose English?

b) How many students did not choose Maths or English?

c) What is the probability that a student chosen likes both Maths and English?

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Q212.

a) What is the 3rd Prime Number?

b) What is the sum of the first five Prime Numbers?

c) What is the product of the 4th and 7th Prime Numbers?

Q213.

Amelia visited a newsagent and paid for her items with a five pound note. When she received her change there were six coins, each of which was different and the value of each was a multiple of 5 (in pence). How much did she spend?

Q216.

Raymond wants to buy a travel card and has three options:

1. The Gold travel card costs £185 and means that he never has to pay when he gets on a bus or train.

2. The Platinum travel card costs £120 and means that he never has to pay when he gets a bus but does have to pay for trains.

3. The Silver travel card costs £150 but means that whenever he gets a bus or train he only pays 50p.

Usual costs for buses are £1.50 per trip and trains cost £2 per trip.

If Raymond is expecting to use the bus 50 times and the train 30 times, which card should he buy?

Q214.

Given that 317×569=180373, which of the following is not true?

a) 3.17×56.9=180.373

b) 31.7×56.9=1808.73

c) 0.317×569=1803.73

d) 0.317×5.69=1.80373

Q215.

The volume of a cube is 125cm³. If I added the lengths of each edge together, what length would I get?

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Q217.

A set of cards are numbered from 1 to 20.
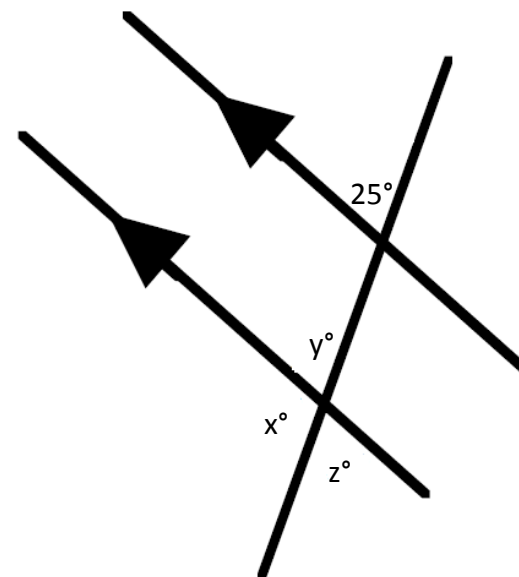
How many of the cards do not show prime

numbers?

Q218.

Solve each of the following equations:

a) $3t+7=34$

b) $5x+2=3x+18$

Q221.

Find the value of each of the angles labelled with letters:

25°

y°

x°
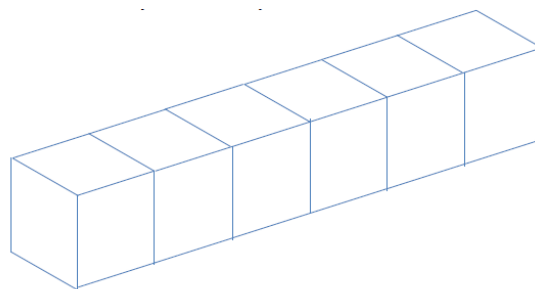
z°

a) x = _____

b) y = _____

c) z = _____

Q219.

Part of a number sequence is shown.

… , 22, 25, 28, …

If the last figure shown is the 12th term in

the sequence, what was the first?

Q220.

Six cubes are glued together and then placed

on the floor. Given that you can move the

object around, how many faces are visible?

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Q222.

If you look at a clock and the time is a quarter to 4, what is the obtuse angle between the hands?

Q223.

Work out:

$$8 \times (9 - 4) \times 2.5$$

Q224.

Part of a number sequence is shown.

… , 105, 120, 135, …

If these are the 7th, 8th and 9th values in the sequence, what is the 100th?

Q225.

A row of houses are numbered 1 – 70. What fraction of the doors have either a 1 or a 9 on them?

Q226.

Solve each of the following equations:

a) $50 - 6m = 26$

b) $4k + 2 = 7k - 25$

Q227.

The volume of a cube is 64cm³. What is the total surface area?

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Q228.

Work out the value of each shape

◇ + ◇ + ◇ = 36   ◇ =

◇ + ♡ - ✚ = 2   ✚ =

♡ + ◇ + ♡ = 30   ♡ =

△ + ✚ + ♡ = 40   △ =

Q229.

The diagram shows a shape.

Work out the area of the shape.

22 cm

10 cm

5 cm

9 cm
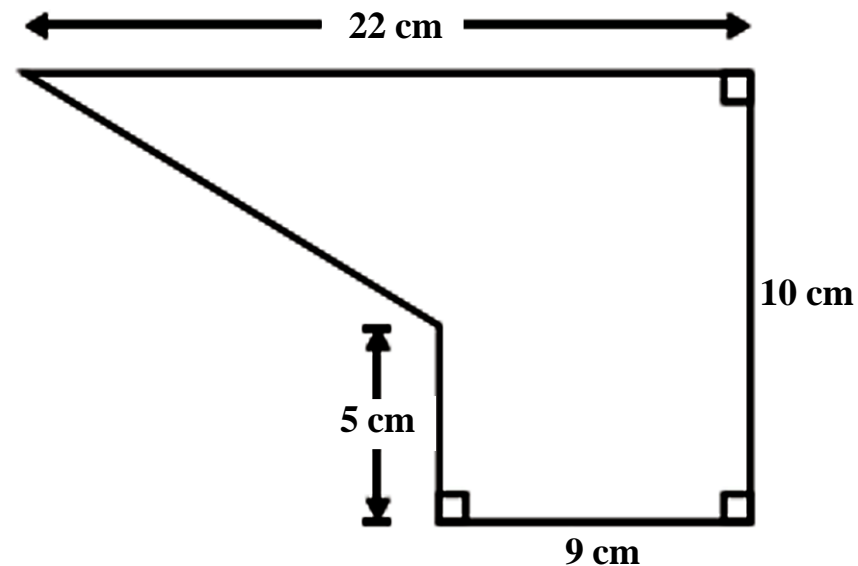
Q230.

What fraction of the square shape is shaded?

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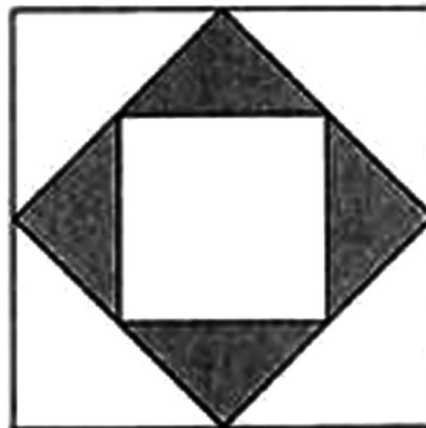
Q231.

Calculate 98.9 x 1000

Q232.

Round 3.4567 to 3 decimal places.

Q233.
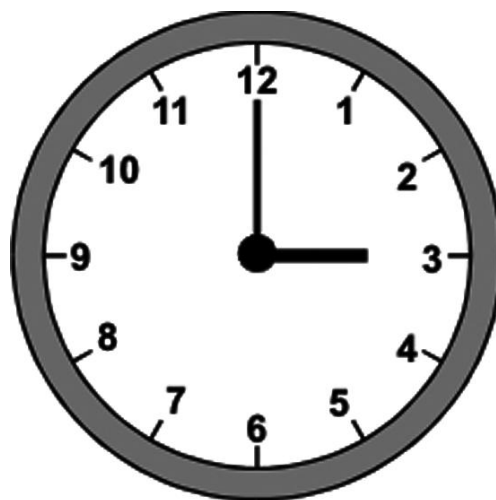
If I know that 8 × 28 is 224

What is 24 × 28?

Q234.

The time on this clock is 3 o'clock.

How long does it take for the minute

hand to move 360°?

Q235.

There are four people in Oscar's family.

Their shoe sizes are 4, 5, 7 and 10

What is the median shoe size in Oscar's family?

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Q236.

In a fairground shooting gallery each target I hit has a score which is an integer. My three shots are all scored, all three scores were different, and each score was an even number. My total was 18.

How many different solutions are there?

Q237.

Find the cost of downloading 5 apps if each one costs £3.98

Q238.

Work out the sum of: 9, 99, 999 and 9999

Q239.

There is an even chance that I will pick a toffee from a large bag of sweets containing toffees, jellies and chocolates. If the bag contains 19 jellies and 10 chocolates, how many toffees are there?

Q240.

The total attendance at Premier League football matches last season was 14,866,769 Round this number to the nearest ten thousand.

Q241.

Shade 30% of this shape

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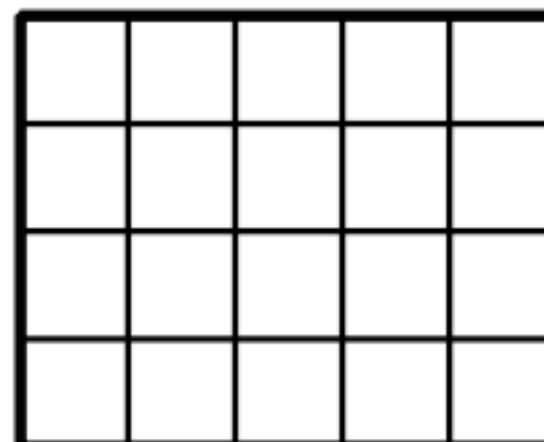
Q242.

Use the fact that:

$$96,815 \times 123 = 11,908,245$$

to work out

$$96,816 \times 123$$

Q243.

Pens cost 8p each and pencils cost 7p each.

I buy some pens and pencils which cost 61p exactly.

How many of each did I buy?

Q244.

Fill in the spaces with one of +, - , ×, ÷ to make each statement correct

$$8 \underline{\quad} 2 = 5 \underline{\quad} 2$$

$$4 \underline{\quad} 3 = 60 \underline{\quad} 5$$

Q245.

The three-digit number shown below can be divided by 3 without a remainder.

Fill in the box to show the largest possible value that the last digit could be.

5	3	

Q246.

At a busy railway station, trains leave from platform 6 every 7 minutes and from platform 8 every 11 minutes. Trains leave from both platforms at 15:57. When do trains next leave both platforms at the same time?

Q247.

The price of a one-day ticket to a theme park is £47.07

Joe buys a ticket and experiences 9 rides during the day.

Work out the average cost per ride.

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Q248.

Write the words, square, rectangle, parallelogram, trapezium, kite and rhombus

in the spaces below.

_____ _____ _____

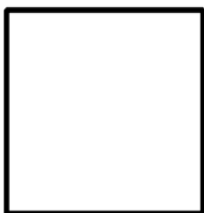_____ _____ _____
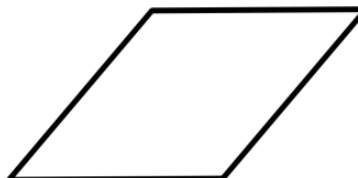
Q249.

Draw lines to link each object to its correct height.

**Oak tree**

0.353 km

Eiffel Tower

2.31 m

Can of soda

2280 cm

Car

132 mm

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Q250.

The diagram shows a scale drawing of a rectangular school playground.

The distance between consecutive marks shown on the diagram is 35 metres.
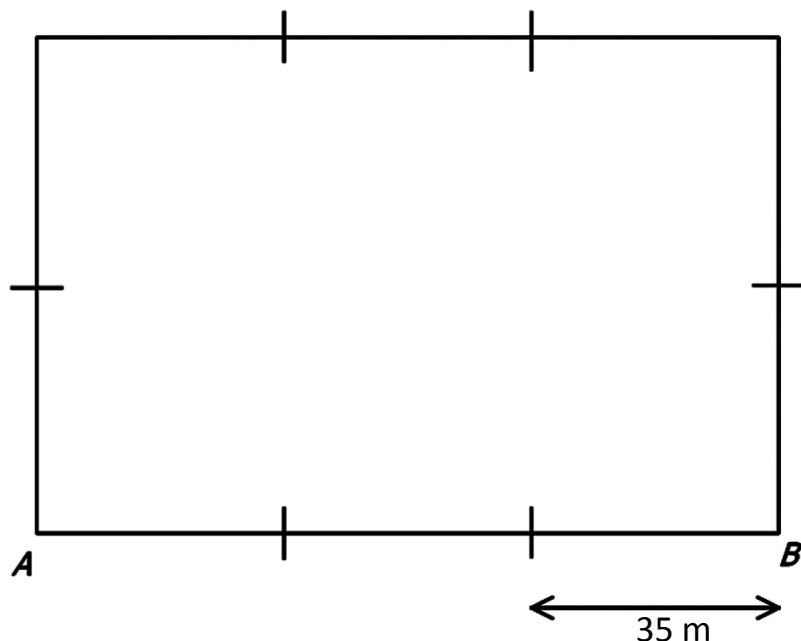

Work out the distance along the side AB. [_____] metres
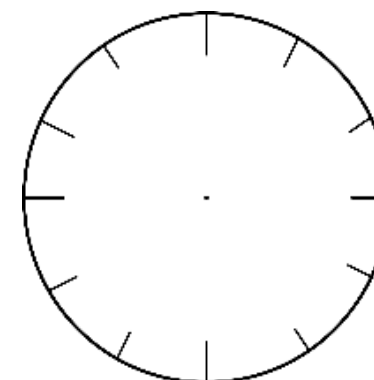
Work out the perimeter of the playground. [_____] metres

Amelia runs round and round the perimeter of the playground in a clockwise direction. She starts at the bottom left-hand corner labelled A on the diagram. Given that she runs a total distance of 1715 m, draw a cross on the diagram to show where she finishes her run.

Q251.

Write down the time shown on this clock.

[_____]
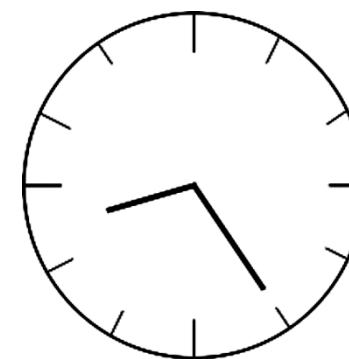
Alice looks at this clock in a mirror. Draw the hands on the clock face below to show the image that Alice sees.

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Q252.

A sunflower seed takes a week to germinate after it has been sown in the ground. After germination it grows the same number centimetres each day.

Maya sows a sunflower seed. She measures the height of the plant at midday on the 16th August and again at midday on the 21st August. These two measurements are recorded as 48 cm and 68 cm respectively.

Work out the height of the plant at midday on September 2nd.

Q253.

A sequence of numbers which get multiplied (or divided) by a fixed amount each time is called a geometric progression (GP). For example, the sequence

1st term = 6, 2nd term = 12, 3rd term = 24, 4th term = 48

is a GP because you multiply by 2 to go from one term to the next.

The 1st term of a GP is 8 and the 2nd term is 24. Work out the 3rd term.

The 1st term of a GP is 20 million and the 2nd term is 2 million.

Work out the 5th term.

The 1st term of a GP is 8 and the 3rd term is 200. Work out the 2nd term.

Q254.

Once upon a time, in the Ancient Wizarding World of Agrabadabra's

One pound = 30 shillings

One shilling = 22 pence

A large Margarine-tub costs 1 pound 4 shillings and 9 pence.

A small Margarine-tub costs 16 shillings and 5 pence.

Work out the difference in price between a small and large tub.

Give your answer in shillings and pence.

[ ] shillings [ ] pence

Work out the total cost of one large and two small tubs.

Give your answer in pounds, shillings and pence.

[ ] pounds

[ ] shillings

[ ] pence

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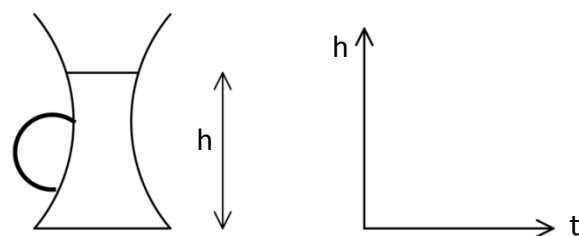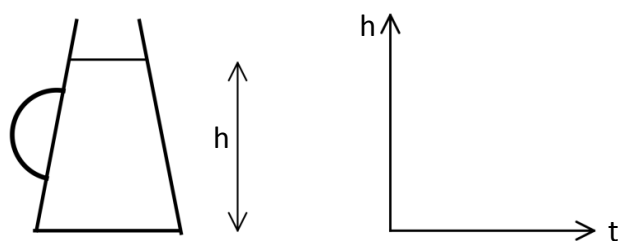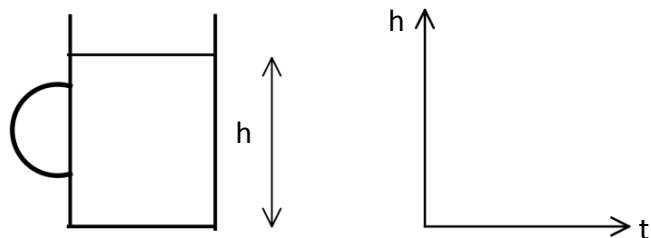or visit www.11practicepapers.co.uk

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Q255.

An empty jug is filled with water at a constant rate. The graph shows how the

height, h of the level of water varies over time, t, as the jug fills up.
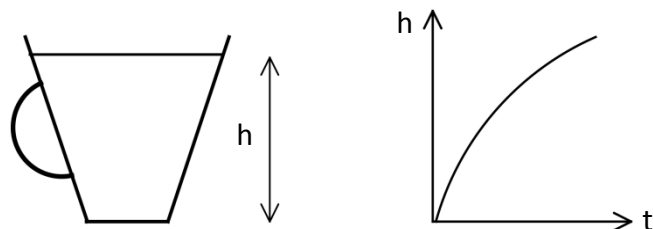
For each of the following jugs draw the graph which shows how the height of
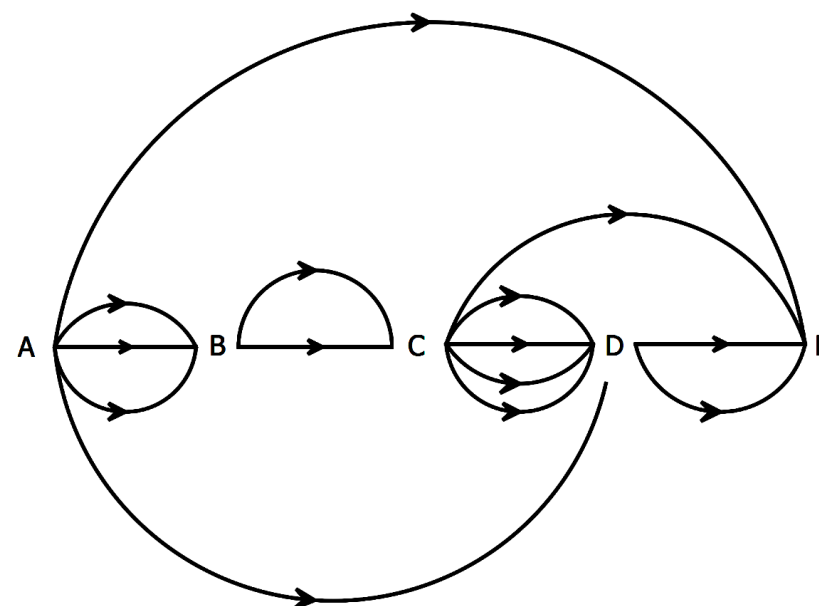
water varies with time.

Q256.

The diagram shows the one-way cycle paths in a park.

Work out the total number of possible routes to go

from A to C

from A to D

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Q257.

Helen works out the width of the base and the area of each of the following four shapes and then draws a corresponding blob showing these measurements on a graph.
Label four of the blobs on the graph with the letters A, B, C and D.
Draw a possible right-angled triangle, E, which corresponds to the remaining blob on the graph.

A   B   C   D
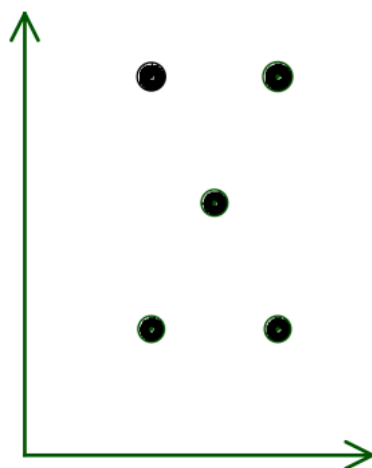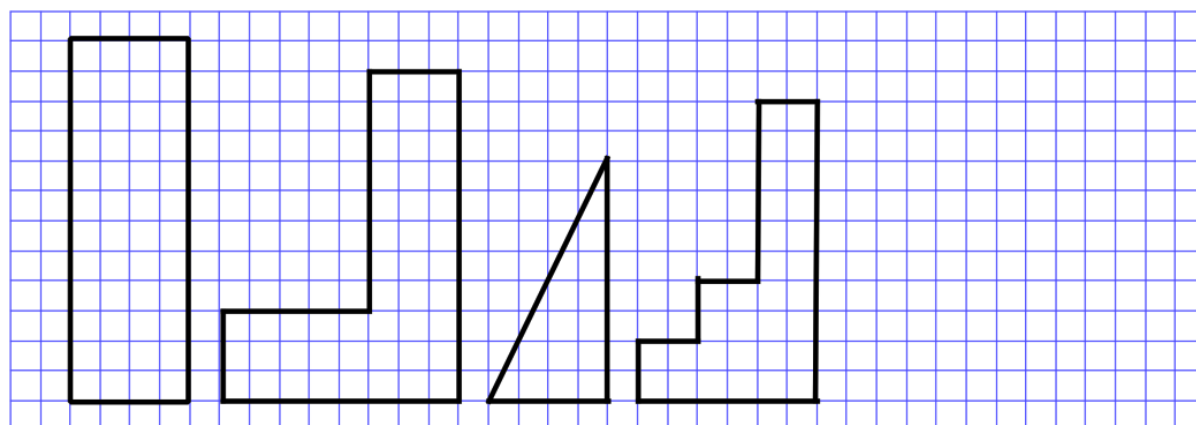
Q258.

Snow White and the seven dwarves work in a mining company. As Chief Executive, Snow White earns the same as all the dwarves wages put together. Sneezy gets 24 gold galleons a day. Sleepy earns 50% more than Happy. Bashful earns twice as much as Grumpy who earns one more galleon than Sneezy. Doc gets 24 galleons a day more than Dopey and between them they get four times that of Sneezy. Sleepy earns seven-eighths of Sneezy's salary. Complete the table below to work out how much Snow White earns in a day.

	Gold galleons
Bashful	
Doc	
Dopey	
Happy	
Sleepy	
Sneezy	
Grumpy	

Snow White earns [   ] galleons

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Q259.

Write 0.045 as a percentage

Q260.

46% as fraction

Q261.

$\frac{21}{60}$ as decimal

Q262.

Write in figures the number "two hundred and three thousand, one hundred and seventy"

Q263.

Given that $\frac{1}{6} + \frac{1}{2} = \frac{2}{3}$

What is $\frac{2}{3} - \frac{1}{2} = ?$

Q264.

What time is 1 hour and 37 minutes later than 13:43?

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Q265.

If $\frac{2}{3}$ of a number is 14, what is the number?

Q266.

I think of a number multiply it by 3 and then subtract 17. If the answer is –5, what number did I start with?

Q267.

What number is half way between 5.6 and 9.4?

Q268.

Complete this calculation.

$21 \times 6 + 9 \times 6 =$

Q269.

A spaceship travels 193 metres per second for 5 minutes 7 seconds. Use approximations to decide whether the distance travelled will be nearer to 1km, 10km, 60km or 600km. (You must show your working).

Q270.

Tom only has 4 smarties left, one each of red, green, orange and yellow. If he chooses 2 smarties, list all the possible combinations of colours.

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Q271.

In a bowl there are 6 apples, 3 plums and 4 peaches. If I choose one piece of fruit at random, what is the probability.

a)   That it is not a plum?

b)   That it is a banana?

Q272.

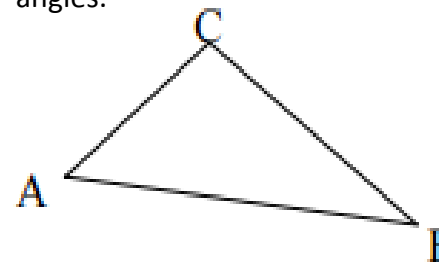a)   Find the area of this shape.

b)   Find the perimeter.

2 cm   2 cm

5 cm

2 cm

10 cm

3 cm
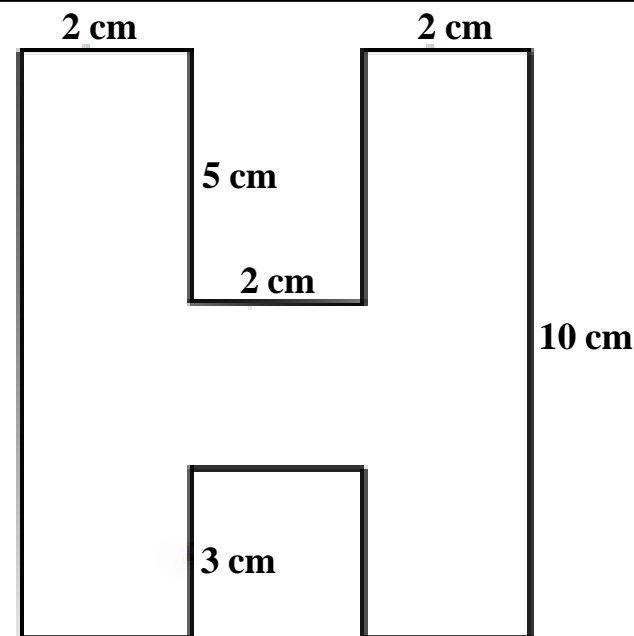
Q273.

In the sequence 1, 3, 4, 7, 11.......................... each number after the second is the sum of the two previous numbers of the sequence. What is the 9th number of the sequence?

Q274.

The length a rectangle is twice its width. Its area is 98cm². Find its length and width.

Q275.

In this question the diagram is not drawn accurately, so the angles cannot be found by measuring with a protractor. The angles of a triangle add up to 180°. In this triangle, angle A is the same as angle B, and angle C is twice angle B. Work out each of the three angles.

C

A

B

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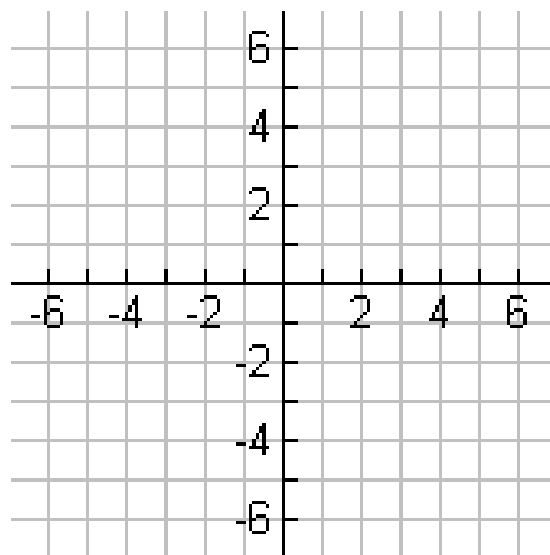
Q276.

Plot the following points

(3, 3), (-1, 3), (-1, -4)

Join them to form a triangle.

Draw another triangle joined onto this one so that the combined shape has one line of symmetry.

Q277.

An approximate method of deciding how much sleep a young person needs is to subtract their age from 33 and divide by 4.

a) How much sleep does an eleven year old need?

b) How old is a person who needs 5 hours sleep?

c) How old is the person who needs no sleep at all? (If the formula is correct!)

d) Does it make sense to use the formula for older people? Give a reason for your answer.

Q278.

Nine bus stops are equally spaced along a bus route. The distance from the first to the third is 600 metres. How far is it from the first to the last in kilometres?
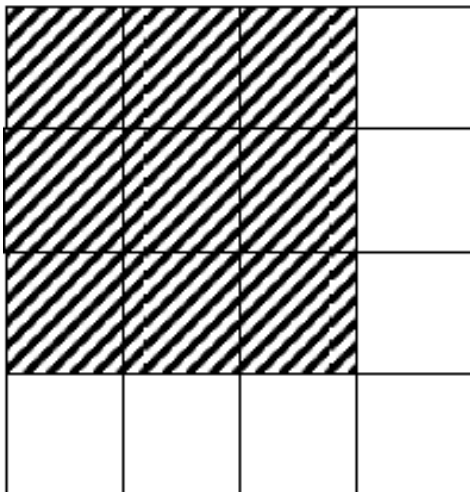
Q279.

When asked how many chickens and cows he had on his farm, Mr Brown refused to answer directly, but he did say that the total number of heads was 30 and the total number of legs was 100. How many of each was there?

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Q280.

Inside the large square (of "size 16") a smaller square of "size 9" is shown shaded.

a) How many different "size 9" squares are there inside the large square?

b) How many different "size 4" squares are there inside the "size 16" square?

Q281.

Complete the following:

a) $7 \times 5 + 3 - 4 =$

b) $7 \times 8 - 3 + 5 - 2 + 2 =$

c) $12 \times 9 - 3 + 4 - 3 - 1 =$

d) $42 \div 6 + 3 + 4 - 3 - 3 - 4 =$

e) $81 \div 9 + 2 - 4 - 5 + 6 =$

f) $84 \div 12 + 2 - 3 + 3 - 5 =$

Q282.

Work out 581 – 2229

Q283.

Write this number in words:

1,023,506

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Q284.

£1 = 3.5 Tunisian Dinars

Alia changes £24 into dinars. How many dinars does she have?

Q285.

£1 = 3.5 Tunisian Dinars

Charlotte changes 80.5 dinars into pounds.

How many pounds does she have?

Q286.

Menu	
Hot dog	$5.10
Chicken salad	$4.50
Hamburger	$3.80
Pizza	$4.00

A British family are on holiday in San Francisco.

At a café they order 3 hot dogs and 1 chicken salad.

The exchange rate is £1 = $1.20 Work out their total bill in pounds.

Q287.

Which number is closest to 2.5?

3   2.1   2.494   2.449   2.51

Q288.

Reflect this drawing in the dashed line.
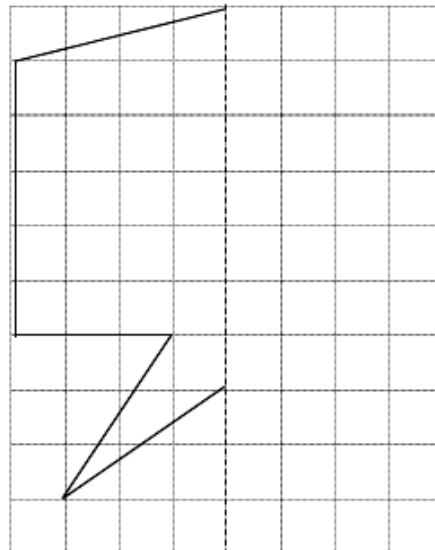
Q289.

Fill in the missing numbers.

a) 90 + [ ] = 210

b) [ ] − 45 = 66

c) 25 × [ ] = 300

d) 800 ÷ [ ] = 20

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Q290.

Write the mathematical names for the following shapes.

Q291.

Bill has a bag containing 70 sweets. He eats half of the sweets himself and then gives away a fifth of the sweets that remain. How many sweets does Bill have left?

Q292.

The Fibonacci numbers are a sequence of numbers formed so that the first two numbers are 0 and 1, and each subsequent number is the sum of the two previous numbers.

So the first eight terms of the sequence are:

0, 1, 1, 2, 3, 5, 8, 13

What is the next Fibonacci number?

Q293.

How many triangles can you find in the diagram below?
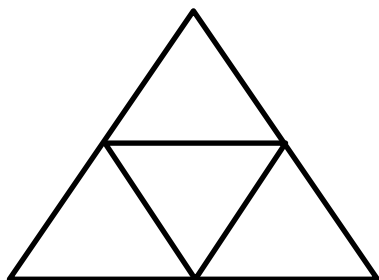
Q294.

Bill is twice as old as his son, who is 60 years younger than Bill's father. If the total of their ages is 152, how old is Bill?

Q295.

If TEDDY BEAR in code is 62773 8241, what does 741627 mean?

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Q296.

Jack gives these answers to four questions.
Circle any you think are likely to be correct.

a) A lorry weighs 2000 grams

b) A ten year old boy weighs 35 kilograms

c) Big Ben's tower is 200 centimetres high

d) A horse is 15 metres high

Q297.

The favourite sports of a group of 100 boys are shown in the table below. Calculate the missing number.

Cricket	17
Rugby	35
Soccer	
Other	19

Q298.

Ruth usually goes to visit her friend on a Friday. Today is Thursday. Write the letter of the one statement which must be true.

a) Ruth went to visit her friend today.

b) Ruth went to visit her friend yesterday.

c) Tomorrow Ruth will visit her friend.

d) Tomorrow will be Friday.

Q299.

Write one letter in each box to continue the order of the letters.

a) E J F K G L [ ] [ ] [ ]

b) Z A X B V C [ ] [ ] [ ]

c) H N J K L H [ ] [ ] [ ]

Q300.

A rectangle measures 6.2cm by 9.1cm.
What is its area?

Q301.

Three gear wheels turn one another. X has 8 teeth, Y has 12 teeth and Z has 16 teeth. In one minute, X turns 30 times. In this time, how many turns do Y and Z make? Draw arrows to show the directions in which Y and Z move.

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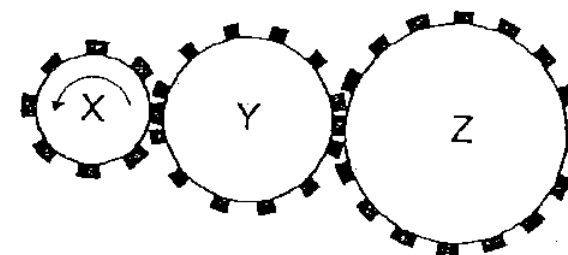
Q302.

There are 40 coloured counters in a box. Half of them are red, one-fifth are yellow and the rest are green.

a) How many are green?

b) If I shake the box and then pick out one counter, what is the probability that it is green?

Q303.

Write down in rising order of size all the 4-digit numbers which can be formed by using the digits 7, 8, 5 and 9 once each. The first is 5789.

Q304.

To go and watch a film at the cinema, the seats cost £5 each for a child and £8 each for an adult. If i was charged £57 for all of the seats I bought and I bought more child tickets than adult tickets, how many of each did I buy?

Q305.

To cook a joint of meat, you leave it in the oven for 40 minutes for every kilogram it weighs plus 30 minutes extra.

Find how long you would cook a joint weighing 4½ kg in hours?

Q306.

James has 32 sweets. He eats 24 of them. What percentage of the sweets has he eaten?

Q307.

Write each of these amounts to the nearest hundred pounds:

a) £675

b) £2,945

c) £90,095

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Q308.

David jogs at 4 metres per second. How far, in kilometres, does he jog in 24 minutes?

Q309.

What percentage is 18p out of £4.00?

Q310.

I used my calculator to work out (31 × 9) ÷ 52. Before doing so I worked out in my head that the answer should be about 6. What simple calculation did I do in my head?

Q311.

A plane leaves Glasgow Airport at 20:30 and takes 5¾ hours on its journey. At what time does it arrive?

Q312.

How much is forty-two thousand and eight less than one million?

Q313.

How many days is it from 2nd March 2020 to 5th April 2020?

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Q314.

Write in figures the number two million, two hundred and two.

Q315.

Subtract 2018 from 8102

Q316.

I thought of a number, halved it and then subtracted 9.

I got an answer of 12.

What was my original number ?

Q317.

Divide (2018 − 20 + 18) by 8.

Q318.

What number (written in digits) is twenty less than twenty thousand?

Q319.

James went shopping with £120 in his wallet.

He spent 10% of his money on a book and 20% of the rest on a DVD. How much money did he then have left?

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Q320.

Jack is making some small snacks for a party. He cuts 1.2 kg of cheese into a number of 30 g pieces. How many pieces does he have?

Q321.

The sum of three consecutive whole numbers is 60. What is the largest of the three numbers?

Q322.

What is the smallest positive whole number that divides exactly by 1, 2, 3, 4 and 5?

Q323.

What is the name of the special quadrilateral that has no lines of symmetry?

Q324.

A right angled triangle has an angle of 55°. What is the size of the smallest angle in the triangle?

Q325.

| $\frac{3}{4}$ | $\frac{2}{3}$ | $\frac{7}{10}$ |

For the three fractions in the table above, write down

a)   the largest fraction

b)   the smallest fraction

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Q326.

Work out the difference between:

$$\frac{3}{4} \text{ and } \frac{9}{12}$$

Q327.

A flask holds 681ml when it is one quarter empty.

How much does it hold when it is one quarter full?

Q328.

In the diagram, the small squares are all the same size.

What fraction of the large square is shaded?
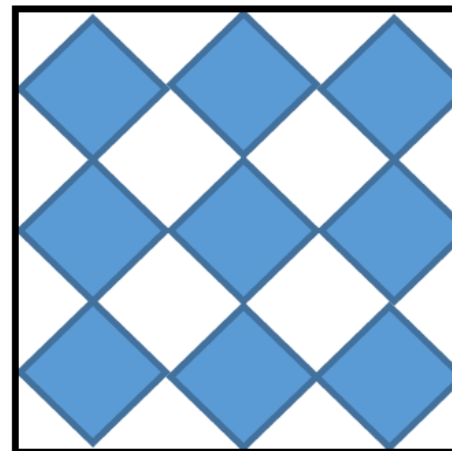
Q329.

I set off with a £20 note to buy a book costing £5.95, a cake costing £2.30 and a new pen. I got £8.25 change.

How much did the pen cost?

Q330.

Six children each had an equal share of a sum of money. They each received £3.18 and there was 2p left over.

How much was the sum of money?

Q331.

Auntie Jean is saving all her 5p coins in a jar.

The total amount of money in the jar is £23.85.

How many coins are in the jar?

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Q332.

What is the missing number in each of these sequences?

a)   8, 16, ….., 64, 128

b)   3, 13, 24, ….., 49, 63

Q333.

I write down a sequence of numbers. My first number is 160000. I then divide by 4 to get the next number each time. What is the 4th number in my sequence?

Q334.

A pattern that repeats every six symbols starts like this:

▲ , ☺ , ▲ , ♥ , ▲ , ♣, ▲ , ☺ , ▲ , ♥ , ▲ , ♣

What is the 102nd symbol in the sequence?

Q335.

Andrea puts a casserole in the oven at 11.40am. It needs 1 hour and 45 minutes to cook. At what time will it be cooked?

Q336.

Abdul is 20 years, 20 months, 20 weeks and 20 days old. What age will he be on his next birthday?

Q337.

Kishan makes a stack of identical cans with 6 on the bottom row, 5 above that, then 4, then 3, then 2, then 1 on top.
Kishan makes a stack twice as high. How many cans are there in Kishan's stack?

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Q338.

Find the missing number below :

$$\frac{3}{5} \text{ of } \boxed{} = 27$$

Q339.

The faces of a regular octahedron are to be painted so that no two faces which have an edge in common are painted in the same colour. What is the smallest number of colours required?
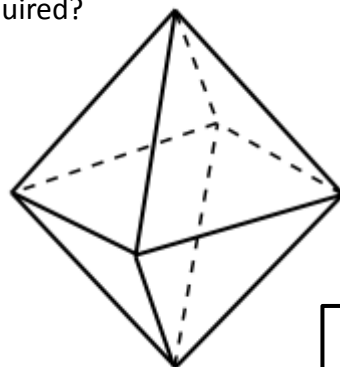
Q340.

Chandu is facing South East. In which direction will he be facing if he turns clockwise through 3 right angles?

Q341.

A group of 40 adults and 16 children paid £508 in total to watch a football match. Each child ticket cost £6. What was the cost of each adult ticket?

Q342.

In a sale, prices are reduced by 19%. What is the sale price of a hoody that originally cost £40?

Q343.

Gus has twice as many stickers as Amin and five more than Kaylan. They have 35 stickers altogether. How many stickers does Gus have?

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Q344.

The card is grey on the front and black on the back.

When piece A is turned over, which one of the

shapes below shows its black side?

Put a ring around the correct answer.

front of piece A
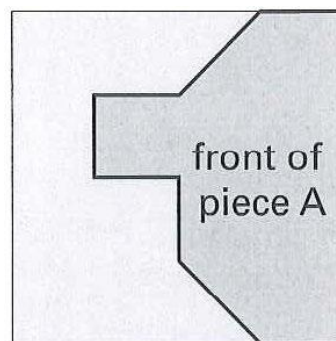
Q345.

If k is a whole number that is divisible by 2, 3 and 5 which one of

the following must also be divisible by 2, 3 and 5?

a) k + 6

b) k + 15

c) k + 30

d) k + 45

Q346.

Amelia and Harry ran a 1500 metres race.

The graph shows information about the race.
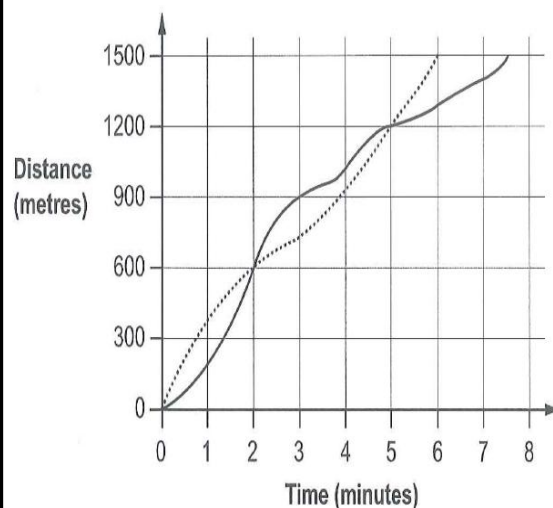
Key
_____ Harry
………………. Amelia

a) For how many minutes was Harry in the lead?

b) After how many metres were they level

during the race?

c) Who won the race?

Q347.

A cube has each of its faces covered by one face of

an identical cube, making the solid shape shown.

The volume of the solid shape is 840 cm³.

What is the volume of one of the cubes?

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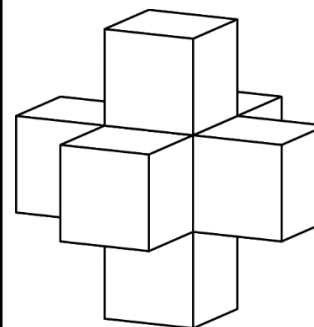
Q348.

The diagram shows the co-ordinates

of three points A, B and C.

Shape ABCD is a kite.

What are the coordinates of point D?

B (6, 7)

A
(3, 4)

C (12, 4)

D

Q351.

The diagram shows a pentagonal prism.

Write the letter of the one shape below

that is a net for the pentagonal prism.

A

B

C

D

E
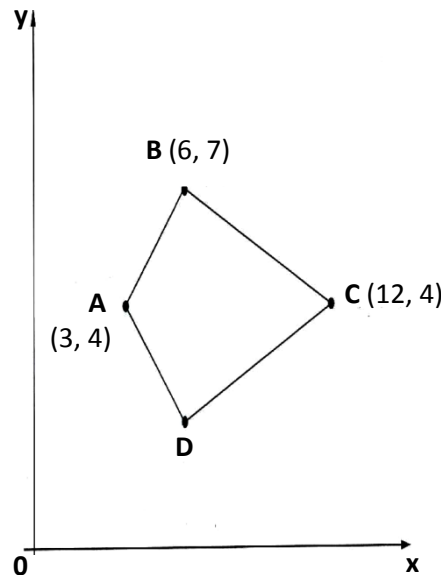
Q349.

Given that ▲ + ▲ = ■

and ■ + ▲ = ●

and ♦ = ● + ■ + ▲

How many ▲ s are equal to ♦ ?

Q350.

5 toffees weigh the same as 6 maltesers and 3

toffees. How many maltesers would weigh the

same as 11 toffees?

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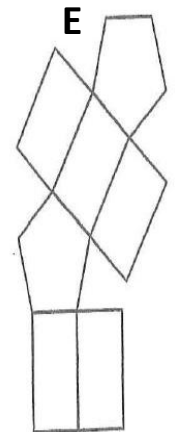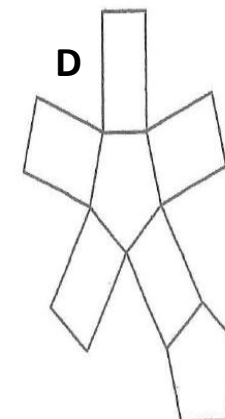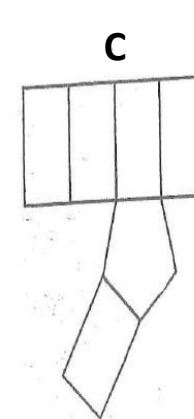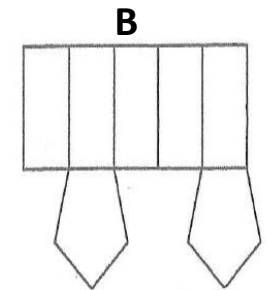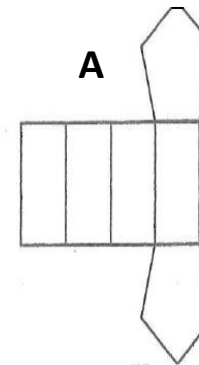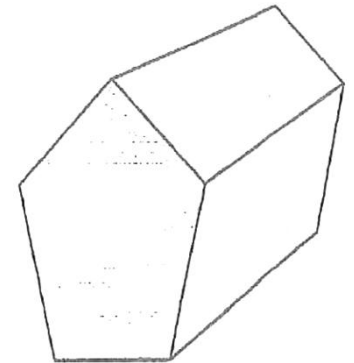
Q352.

Jack has a lot of tables. Each rectangular table seats 8 people. Each round table seats 5 people. What is the smallest number of tables Jack needs to use to seat 45 friends and himself, without any empty seats?

Q353.

How many odd three-digit numbers is it possible to make, using just the numbers 1, 2 and 3?

(You are allowed to use each of the numbers more than once in a particular three-digit number.)

Q354.

Which one of the following numbers is three less than a multiple of 5 and three more than a multiple of 6?

a) 12

b) 17

c) 21

d) 22

e) 27

Q355.

What is the smallest four-digit positive whole number which has four different digits?

Q356.

Last year, 275 of the 500 pupils at a school were girls.

This year, there are 540 pupils in the school but the proportion of girls is the same as last year. How many girls are at the school this year?

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Q357.

Work out the following:

$$0.1 \text{ of } \frac{3}{5} \text{ of } 33\text{kg}$$

Q358.

Write down the answers to the calculations.

(Hint: there is a quick way!)

a) $(49 \times 37018) + (51 \times 37018)$

b) $(26 \times 37018) - (25 \times 37018)$

Q359.

Maya cuts a 6 metre piece of string into three different pieces.

The longest piece is 50 cm longer than the middle piece.

The middle piece is 70 cm longer than the shorter piece.

How long (in centimetres) is the longest piece?

Q360.

How many triangles are there in this diagram?
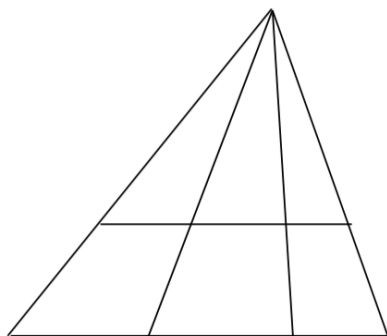
Q361.

Put brackets in this calculation to make it correct:

$$3 \times 4 - 2 + 3 = 9$$

Q362.

Freya's bus leaves at 08:05. She arrives 12 minutes early for the bus. At what time does she arrive?

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Q363.

How much more than − 3°C is 5°C?

Q364.

Work out:

£6 − £3·24

Q365.

Lucy has 36 marbles. She gives 1/3 of them to Vix and a half of the rest to Sarah. How many marbles are left?

Q366.

Find $\dfrac{3}{4}$ of £75

Q367.

Ruby has collected thirty-five 5p coins for charity. How much more does she need to reach £2?

Q368.

I buy 3 cakes for 49p each and a drink for 98p. What change will I have from a £10 note?

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Q369.

How many 8cm pieces of string can be cut from a piece of string 0.9m long?

Q370.

Small egg boxes can hold seven eggs. How many egg boxes are needed to hold 1666 eggs?

Q371.

I am thinking of a two-digit number that is a multiple of seven. The digits add up to 10. What is the number?

Q372.

Two angles of a triangle are 49° and 52°. What is the third angle?

Q373.

Find the area of a square whose perimeter is 20cm
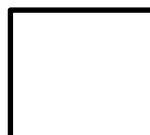
Q374.

How many mm is three-fifths of a metre?

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Q375.

Seven out of forty pupils said they watch the news on television. What angle would this be on a pie chart?

Q376.

What is 9 x 8 x 7 x 6 x 5 × 4 × 3 × 2 × 1 × 0?

Q377.

Here is a shape.

I rotate the shape 45° clockwise.

Tick the diagram that shows the shape after the turn.

Q378.

What is the missing number in this number sentence?

$$3 \cdot 6 \times ? = 1 \cdot 8 \times 7$$

Q379.

The mean of two numbers is six. One of the numbers is minus two. What is the other number?

Q380.

The students in a class had a sponsored swim.

They collected £627.25

a) How much is £627.25 to the nearest hundred pounds?

b) How much is £627.25 to the nearest ten pounds?

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Q381.

The table shows the average length of pregnancy for different mammals.

Mammal	Average length of pregnancy
Dolphin	276 days
Horse	337 days
Seal	350 days
Whale	365 days
Camel	406 days
Elephant	640 days

Use the information in the table to answer these questions.

a) Which mammal has an average length of pregnancy of 1 year?

b) Which mammal has an average length of pregnancy of 50 weeks?

c) A human has an average length of pregnancy of about 9 months. Which other mammal also has average length of pregnancy of about 9 months?

Q382.

$$y = 2x + 10$$

What is the value of y, when x = 4

Q383.

Before I take a counter out of the bag, I put one extra blue counter into the bag. What effect does this have on the probability that I will take a red counter?

a) The probability has increased.

b) The probability has decreased.

c) The probability has stayed the same.

d) It is impossible to tell.

Q384.

The perimeter of a regular hexagon is 42a + 18

Write the expression for the length of one of its sides.

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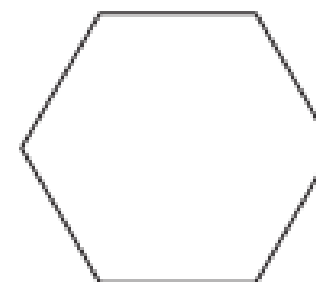
Q385.

Which of these numbers is not a prime number?

a) 2

b) 5

c) 7

d) 9

Q386.

What is 25% of £84?

a) £59

b) £21

c) £109

d) £42

Q387.

What is the sum of the first four odd numbers?

a) 4

b) 10

c) 16

d) 20

Q388.

How many factors do 8, 12 and 20 have in common?

a) 1

b) 2

c) 3

d) 4

Q389.

If x = 5 what is 2x?

a) 10

b) 52

c) 7

d) 25

Q390.

If a + 12 = 17, what is a?

a) 29

b) 5

c) 17

d) none of these

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Q391.

When t = 4, which answer is the odd one out?

a) 2t

b) t + 2

c) 32 ÷ t

d) t + 4

Q392.

I think of a number, double it and add 3. My answer is 15. What was my number?

a) 6

b) 12

c) 33

d) 18

Q393.

What is another way of writing a + a + a + a ?

a) a^4

b) 4a

c) a4

d) aaaa

Q394.

An angle of 280° is called:

a) Obtuse

b) Reflex

c) Acute

d) A straight-angle

Q395.

Does a rectangle have rotational symmetry?

a) Not enough information

b) Sometimes

c) Never

d) Always

Q396.

Here is a net of a 3-D shape.

What 3-D shape can be made by folding up this net?

a) Triangular prism

b) Pyramid

c) Cuboid

d) Cube

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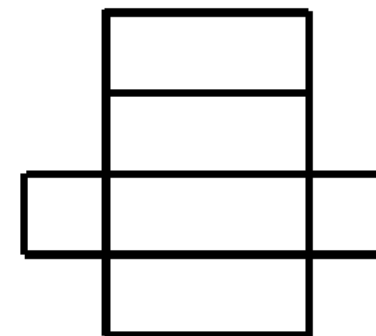
Q397.

A rectangle has an area of 20 cm². It's longer sides each measure 5cm. What is its perimeter?

a) 9cm

b) 18cm

c) 20cm

d) 25cm

Q398.

A triangle has angles of 80° and 20°. The third angle is:

a) 20°

b) 100°

c) 80°

d) 180°

Q399.

Four girls have an average height of 1.4m. A boy, also of height 1.4m, joins them. The average height of all five will:

a) Increase

b) Stay the same

c) Decrease

d) Can't say

Q400.

What is the mode of these numbers?

1, 1, 1, 2, 3, 4, 6

a) 2

b) 5

c) 1

d) 18

Q401.

If a fair dice is rolled 30 times, how many times would you expect to roll a 2?

a) 15

b) 6

c) 5

d) 2

Q402.

One inch is about 2.5 cm. There are 12 inches in 1 foot. How many cm are there in two feet?

a) 12 cm

b) 14.5 cm

c) 24 cm

d) 60 cm

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Q403.

Sam chooses a letter at random from the word ATTITUDE. Which word or phrase best describes his chances of choosing the letter T?

a) Likely

b) Uncertain

c) Unlikely

d) Even chance

Q404.

Here are four shapes in a row. They all have something in common except one.

Which is the odd one out?

Circle the letter.

A   B   C   D
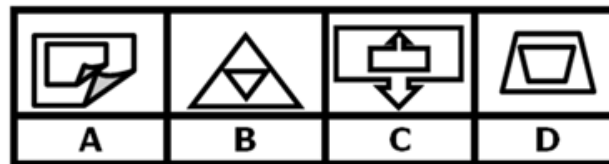
Q405.

How many triangles are there in this diagram?

(Remember that the triangles may be of different sizes!)
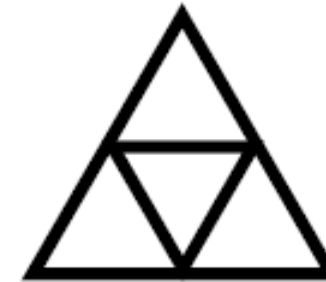
a) 5

b) 6

c) 1

d) 4

Q406.

If x = 4 and y = 2, what is $\dfrac{x + y + 3}{3}$?

a) 3

b) 423

c) 2

d) 15

Q407.

Will's calculator is broken. The + and the − buttons are the wrong way round.

What will he get if he types in 7 − 4 + 1?

a) 12

b) 10

c) 4

d) 2

Q408.

Put these numbers in order of size starting with the smallest.

a) 72.1

b) 72.101

c) 702.1

d) 72.01

e) 72.11

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Q409.

Write in figures the number "ninety four thousand and twelve"

Q410.

Three of these fractions are equivalent. One is not equivalent to the others.

Which one of the fractions is not equivalent?

$$\frac{6}{8} \qquad \frac{12}{16} \qquad \frac{9}{12} \qquad \frac{16}{24}$$

Q411.

Write in the missing numbers.

80% of 80 =

26% of 80 =

9% of 80 =

Q412.

Work out 29.16 + 0.0543

Q413.

Complete this number sentence:

½ of 30 is the same as ¼ of ?

Q414.

Find two numbers that have a difference of 3 and multiply together to get 88.

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Q415.

Two of the digits in this addition are missing. Put the missing digits into the boxes.

$$
\begin{array}{r}
\boxed{}\ 3\ 5 \\
+\quad 7\ \boxed{} \\
\hline
5\ 1\ 3 \\
\hline
\end{array}
$$

Q416.

Fill in all three empty boxes for this multiplication table.

x		5
3	24	15
	16	

Q417.

Calculate the missing angle x

34°   81°

Q418.

Here is a picture of an octahedron.

Write down the number of:

a) Faces ……………

b) Edges ……………

c) Vertices ……………
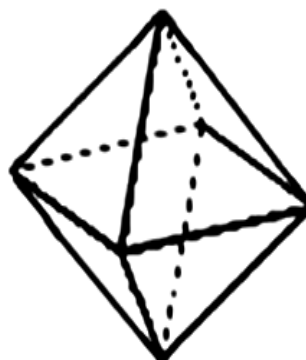
Q419.

A ruler costs r pence. A pen costs p pence.

Match each statement with the correct expression for the amount in pence. The first one is done for you.

Statement	Expression

| The total cost of 5 rulers | 5r |
| | 5p |

| The total cost of 5 rulers and 5 pens | 5 – 5p |
| | 500 – 5p |

| How much more 5 pens cost than 5 rulers | 5r + p |
| | 5(r + p) |

| | 5p – 5r |
| The change from £5, in pence, when you buy 5 pens | 5r – 5p |

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Q420.

Paul has three times as many sisters as brothers. His sister Louise has twice as many sisters as brothers. How many children are there in the family?

Q421.

From the units listed below choose the most appropriate unit to measure the length of an ant:

a) mm

b) cm

c) m

d) km

e) g

Q422.

What is the value of the digit 1 in the number 6234.32123

a) Ten

b) One tenth

c) One hundred

d) One hundredth

e) One thousandth

Q423.

If you put the following in order of size, which one is the largest?

a) 4.54

b) 4.04

c) 4.2

d) 4.3

e) 4.06

Q424.

How many lines of symmetry does a pentagon have?
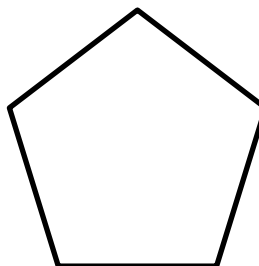
Q425.

How long is it from 08:55 to a quarter to 11?

a) 2 hrs 5 mins

b) 2 hrs 10 mins

c) 2 hrs 20 mins

d) 1 hr 55 mins

e) 1 hr 50 mins

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Q426.

Through what angle has the minute hand

turned between 1300 and 1355

a) 240°

b) 270°

c) 300°

d) 330°

e) 360°

Q427.

How many millimetres are there in a

kilometre?

a) 10

b) 1000

c) 10000

d) 100000

e) 1000000

Q428.

Work out:

$$45 + 3 - 2 + 5 \div 2 \times 4 \div 2 \times 50 \div 3 \times 70 \times 0$$

Q429.

Work out:

$$49 \times 90 \times 33 \times 42 \times 78 \times 0 \times 54 \times 32 \times 85$$

Q430.

In the car park there are 30 cars, 5 have L –

plates, 15 have GB – plates and the rest have

neither.

What percentage have neither?

Q431.

Write the year MMIX in figures.

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Q432.

Find the value of y

62°

y
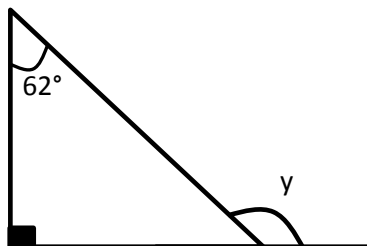
Q433.

8 small blocks have the same mass as 5 large blocks. The mass of one small block is 4.3kg
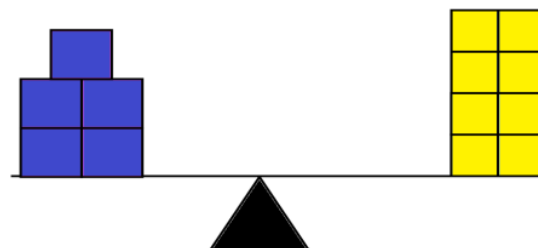
Find the mass of one large block.

Q434.

A 2p coin has a mass of 7 grams. Find the total mass of £60 worth of 2p coins.

Give your answer in kilograms.

Q435.

Write down all the factors of 88

Q436.

Luckman is playing a game. He throws 9 balls at a target, one at a time. Each hit is worth 8 points. Each miss is worth −5 points. Luckman hits the target with 5 of the balls and misses with the rest. How many points does Luckman score in total?

Q437.

The diagonals of a square cross at right angles.
On the grid, draw a different type of quadrilateral where the diagonals cross at right angles.

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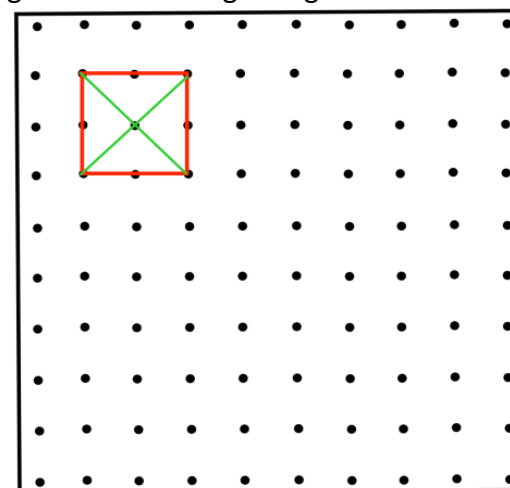
Q438.

Which of these is the smallest?

a) 0.0801

b) 0.08

c) 0.081

d) 0.08001

e) 0.0888

Q439.

The most likely length of a television remote control is:

a) 0.17cm

b) 1.7cm

c) 17cm

d) 170cm

e) 1.7m

Q440.

The mean of four numbers is 6. Three of the numbers are 4, 5 and 8. What is the fourth number?

Q441.

One of the angles in an isosceles triangle is 30°. Which of these is a possible other angle in the triangle:

a) 70°

b) 90°

c) 120°

d) 130°

e) 150°

Q442.

How long is it, in hours and minutes, between 10:34 and 14:21?

a) 4 hrs 57 mins

b) 3 hrs 47 mins

c) 4 hrs 37 mins

d) 22hrs 55 mins

e) 4 hrs 13 mins

Q443.

One quarter of the pupils in a class are girls. The rest are boys. What is the ratio of girls to boys?

a) 1:1

b) 1:2

c) 1:3

d) 1:4

e) 1:5

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Q444.

What is the value of the digit 9 in the number 32.937?

a) Nine hundred

b) Nine

c) Nine tenths

d) Nine hundredths

e) Nine thousandths

Q445.

I buy a pen and a pencil for £1.10. The pen costs 50p more than the pencil. How much is the pen?

a) 50p

b) 60p

c) 70p

d) 80p

e) 90p

Q446.

Write down the next two numbers in these sequences:

a) 7, 10, 13, 16, ……., …….

b) 53, 49, 45, 41, …….., ……..

c) 6, 10, 15, 21, …….., ……..

d) 60, 58, 63, 61, …….., ……..

e) 0.5, 2, 8, 32, ………., …………

Q447.

Put the following in order, starting with the smallest:

a) 4.55

b) 53.5

c) 35.5

d) 5.35

e) 55.3

f) 5.53

Q448.

a) Reflect shape A in the x-axis and label the new shape B.

b) Reflect shape B in the y-axis and label the new shape C.

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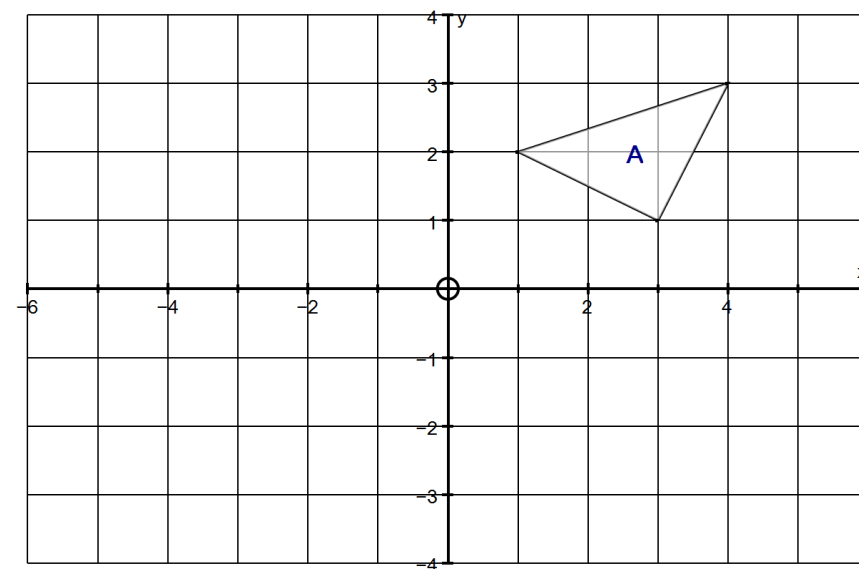
Q449.

On a train there are 140 men and 200 women. What is the ratio of men to women written in its simplest form?

Q450.

I am making a scale model of The Eye-Full Tower, which is 175m tall. If the scale is 1cm : 50m, how long will the model be?

Q451.

The diameter of a 5p coin is 18mm. What is the most number of coins that will fit onto a 300mm ruler?

Q452.

On my wall I want to put some stickers of my favourite character Ronnie Rant. The space I have available is 55cm by 60cm and the stickers are each 15cm by 5cm. What is the maximum number of stickers I can fit on the wall?

Q453.

Two runners are having a race. Gary starts running from the start line at 10m/s. Two seconds later Andy starts running from the start line at 12m/s.

(a) How long after Gary starts running does Andy catch up with him?

(b) How far are they both from the start line when Andy catches up with Gary?

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Q454.

These pictures show parts of a scale with equal gaps between each marking. What number should replace each letter?

0.3   X   1.3

X = [   ]

0.8   Y   1.9
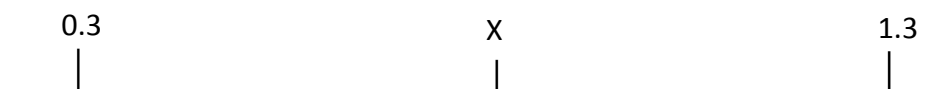
Y = [   ]

Q455.

Work out:

75849 + 6859 - 6859

[   ]

Q456.

How many seconds are there in eight minutes?

a) 8

b) 120

c) 480

d) 240

e) 3600

[   ]

Q457.
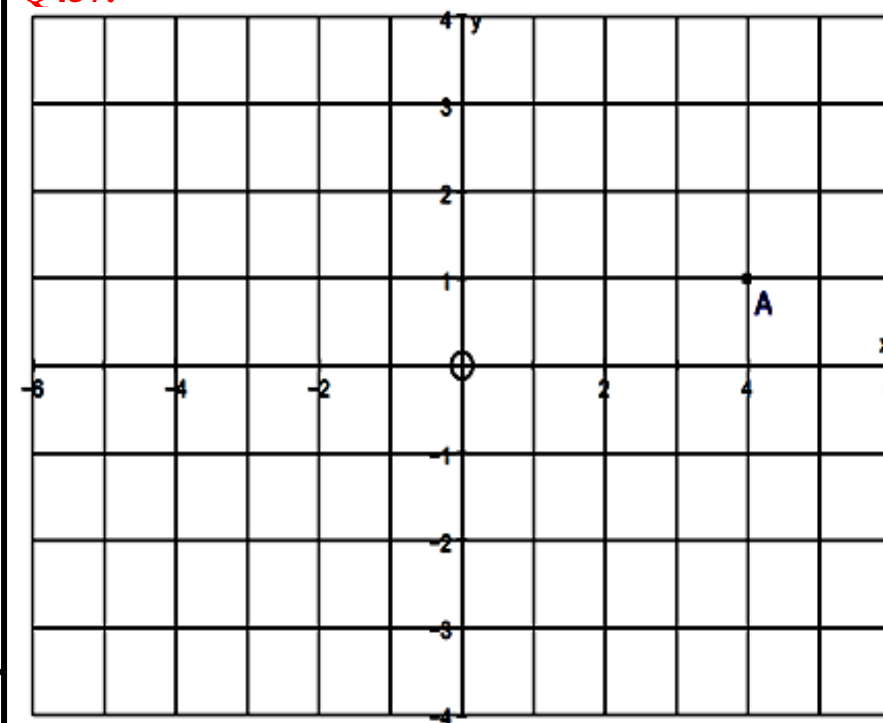
The point A (4,1) has been marked.

a) Mark the point B with co-ordinates (0,4)

[   ]

b) Mark the point C with co-ordinates (-3,0)

[   ]

c) The point D forms a square 'ABCD'. Write down the coordinates of point D.

[   ]

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Q458.

This graph shows the progress of two cars in a race from Leeds to Blackpool and back again.

Car A is the bold line. Car B is the dotted line.
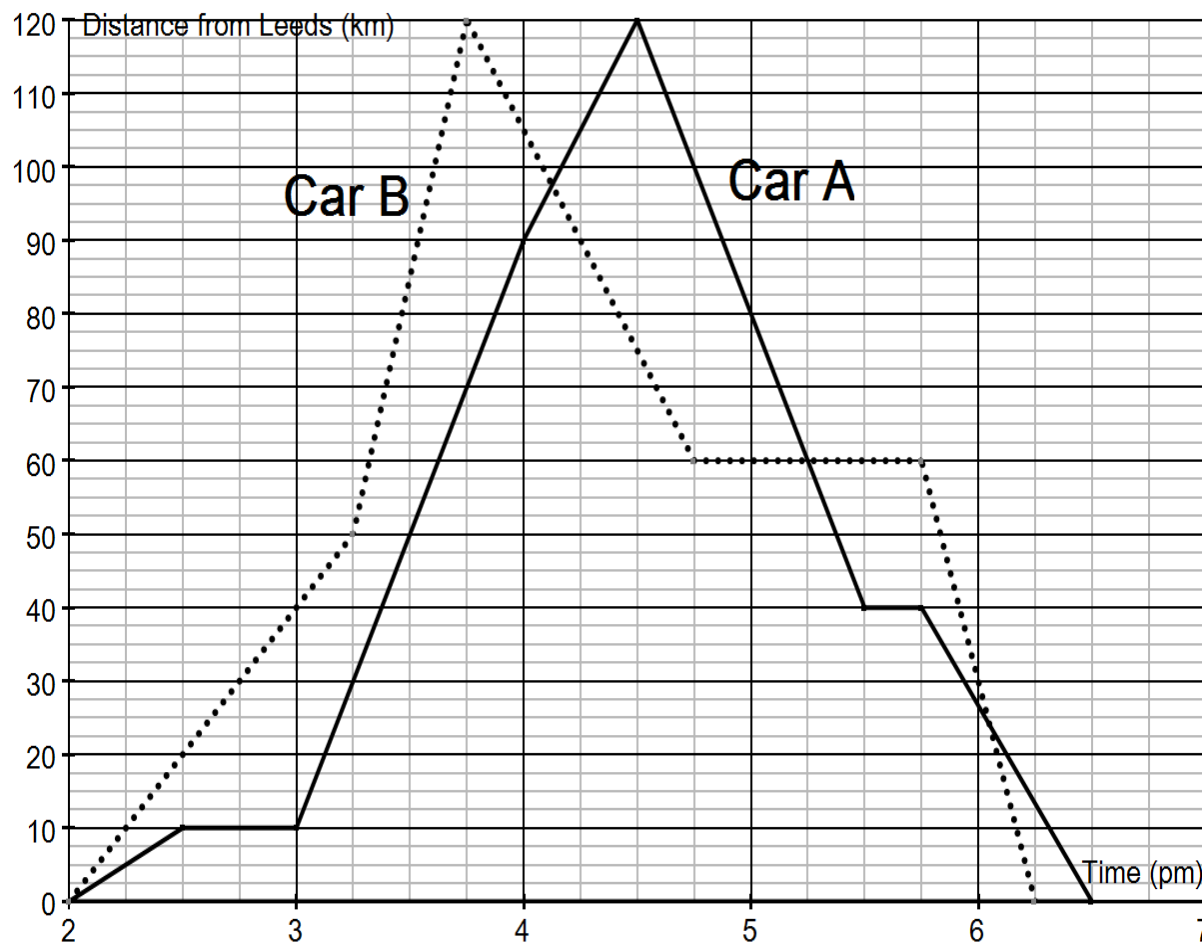
a) How far is it from Leeds to Blackpool?

b) Which car was winning at 3.30pm?

c) Which car was winning at 5.30pm?

d) What was the distance between the cars at 4.45pm?

e) What happened just after 6pm?

f) Which car achieved the highest speed, and between which times did this happen?

g) Which car won the race?

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Q459.

Which of these is the smallest?

a) 0.0801

b) 0.801

c) 0.081

d) 0.08

e) 0.0888

Q460.

The most likely height of a single-decker bus is:

a) 0.35cm

b) 3.5cm

c) 35cm

d) 350cm

e) 3500cm

Q461.

16 x 2 - 2 x 4 =

a) 0

b) 4

c) 12

d) 24

e) 120

Q462.

Two of the angles in a triangle are 25° and 107°. The third angle is:

a) 28°

b) 48°

c) 68°

d) 88°

e) 180°

Q463.

What is the perimeter of a square whose area is 36cm²?

a) 24cm

b) 25cm

c) 30cm

d) 36cm

e) 36cm

Q464.

How long is it, in hours and minutes, between 08:28 and 14:06?

a) 5 hrs 38 mins

b) 8 hrs 34 mins

c) 5 hrs 36 mins

d) 26hrs 34 mins

e) 4 hrs 33 mins

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Q465.

What is the value of the digit 5 in the number 32.459?

a) five hundred

b) fifty

c) five tenths

d) five hundredths

e) five thousandths

Q466.

I buy 6 packets of crisps from the £1.99 store where everything costs £1.99.

How much change do I get from £20?

a) 6p

b) £6.99

c) £11.94

d) £4.06

e) £8.06

Q467.

Bob counts the number of birds visiting his garden every day for a week. The counts were:

17, 12, 8, 16, 2, 5, 10

a) What was the mean score for the seven days?

b) What was the range?

c) A set of four numbers 5, 7, 12 and X have a mean of 10. What is X?

Q468.

Two Roman children were working out the difference in their ages. They wrote down this sum.

$$XIV - IX =$$

What answer did they get in roman numerals?

Q469.

Shannon and Laura share out £20 between in the ratio 3:2. How much does Shannon get?

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Q470.

Draw any lines of symmetry on these shapes. Some may have none or more than one.

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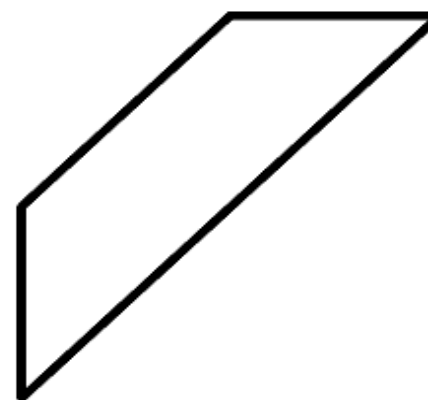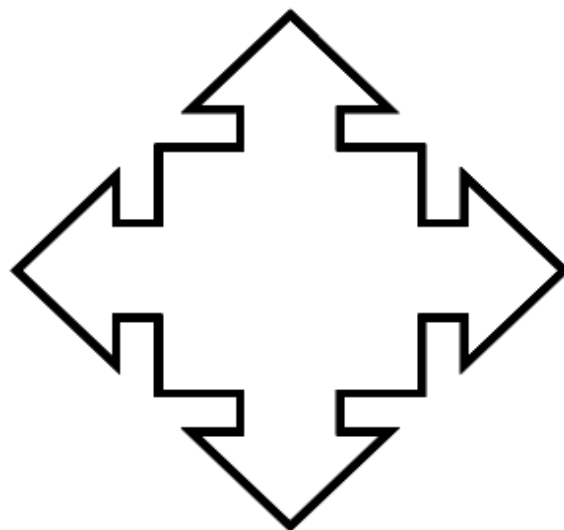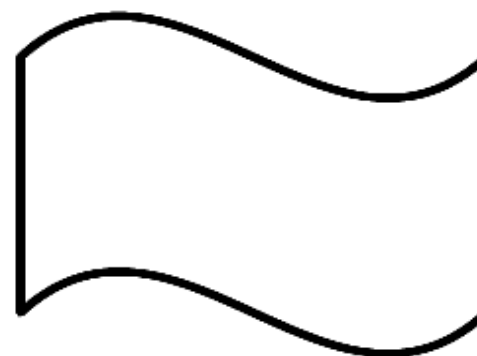
Q471.

I am making a scale model of my yacht, which is 9m long. If the scale is 1:30, how long will the model yacht be (in cm)?

Q472.

My friend Mike is making a scale model of Tower Bridge. Tower Bridge is 60m tall and his model is 120cm tall. What is the scale of the model, in its simplest form?

Q473.

An icicle measured 2.13m at the start of a sunny day, but only 88cm at the end of the day. What length of icicle had melted?

Q474.

When I lay a new patio in my back garden, I will need 290kg of gravel. How many 12kg bags do I need to buy?

Q475.

Work out:

$$35425 \div 13$$

Q476.

A train leaves London and travels at a steady speed of 120mph to Edinburgh. Before reaching Edinburgh, the train stops in Leeds after travelling for one and a half hours. The distance from London to Edinburgh is 420 miles. How long does the train take to travel from London to Edinburgh?

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Q477.

5.3721 + 23.45 − 11.4

Q478.

40.37 − 8.4 − 50

Q479.

Joel bought 128 pencils for his class. The pencils came in boxes of 16. How many boxes did he buy?

Q480.

82.6 x 17

Q481.

15.36 ÷ 6

Q482.

Johan collects football picture cards and has 236 in his collection. However, 57 are duplicates, so he decides to sell the duplicates and buys 34 new cards. How many does Johan have in his collection now?

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Q483.

14532 can be written as 10 000 + 4000 +

500 + 30 + 2

What is the value of the 6 in the number

3796423?

a) 600

b) 6000

c) 60,000

d) 60

e) 600,000

Q484.

How do you write 32,047 in words?

a) Thirty thousand two hundred and forty

seven

b) Thirty two thousand four hundred and

seven

c) Thirty two thousand and forty seven

d) Thirty thousand and forty seven

e) Thirty thousand four hundred and seven

Q485.

How many degrees does the shaded part of this circle represent?

a) 90°

b) 120°

c) 180°

d) 240°

e) 270°
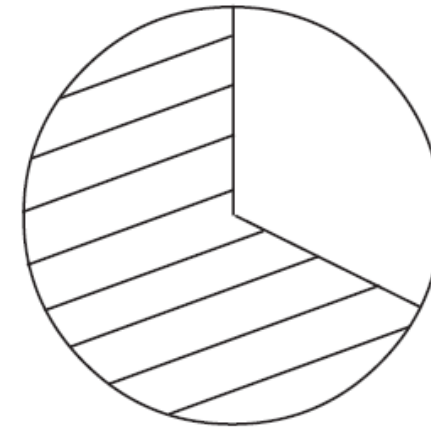
Q486.

Write 3/8 as a decimal.

Q487.

Which of the following numbers is both an

even number and a cube number?

a) 4

b) 16

c) 64

d) 125

e) 180

Q488.

Which lettered line is a line of symmetry?

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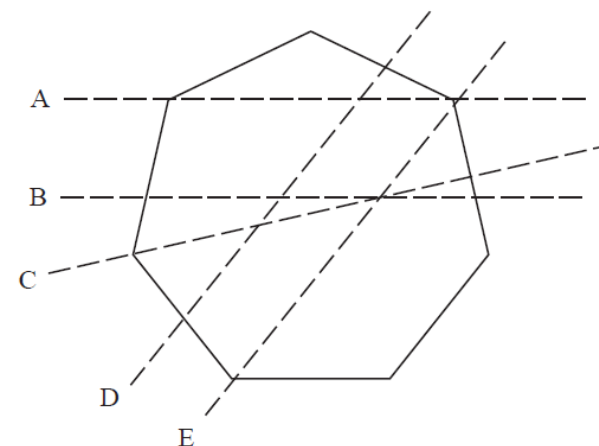
Q489.

Which of the following is most likely to weigh about 70kg?

a) Orange

b) Elephant

c) Car

d) Adult

e) Book

Q490.

It took Jimmy 1 hour and 40 minutes to do his homework. His sister, Jemima, took three times as long. How long did she take?

a) 5 hours

b) 4 hours 20 minutes

c) 3 hours 40 minutes

d) 4 hours 20 minutes

e) 5 hours 30 minutes

Q491.

What is the area of this shape?
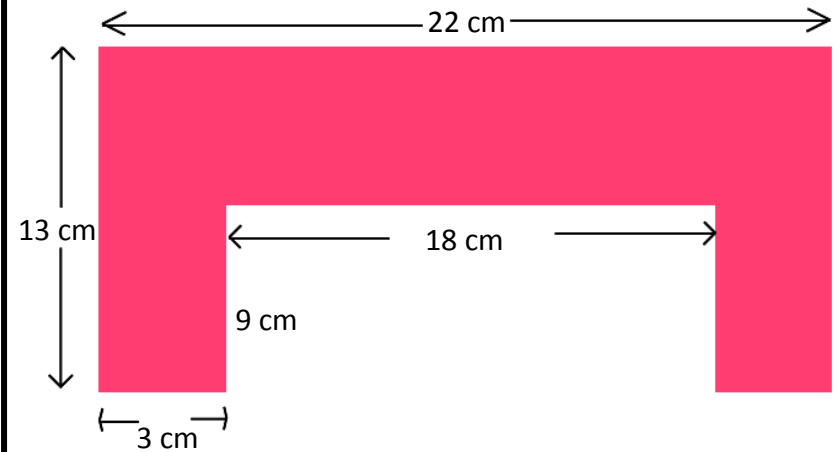
Q492.

5 - 2 + 4 x 3 =

a) -13

b) 25

c) -9

d) 27

e) 15

Q493.

"I am a 2 dimensional shape with four sides that are all the same length, but my corners are not right angles. What am I?"

Q494.

Find the value of angles x and y

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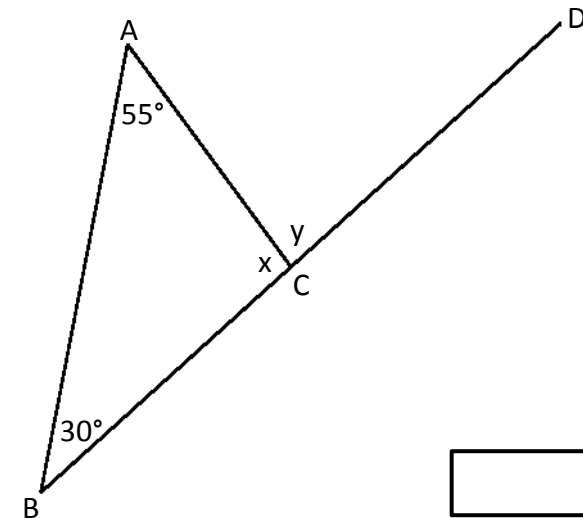
Q495.

Last night it was -6°C outside. Tonight the weatherman says it will be 4°C colder.

(a) What will be tonight's temperature?

By midday today it was 11°C warmer than last night's temperature.

(b) What was the midday temperature?

Q496.

I went to a shop and bought 10 boxes of matches, the number of matches in each box were:

46, 47, 43, 46, 45, 49, 44, 43, 44, 45

What is the mean number of matches in each box?

Q497.

I spin a 5 sided spinner, numbered 1 to 5 on each section.

The score is the section resting on the table

(a) What is the probability of scoring a multiple of 2?

(b) If I spin the spinner twice, what is the probability of getting the same number both times?

Q498.

My calculator is broken, only the following keys work:

[2]   [7]   [x]   [−]   [=]

Using only these keys show how you can make the number 17.

Q499.

Work out 284 + 69 − 271

Q500.

Subtract 2.64159 from 7

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Q501.

Write 0.1268 as a fraction in its simplest terms.

Q502.

In a class of 32, ¾ are boys, how many are girls?

Q503.

Work out 10 + (10 × 0.3) - (10 ÷ 100)

Q504.

How many centimetres are there in 4.7 kilometres?

Q505.

Put these numbers in order of size (smallest first).

-4   -0.2   2.5   2.17   -2.556

Q506.

Put a ring around the number which is closest to half a million.

a) 487,236

b) 52,143

c) 583,932

d) 4,232,184,

e) 5,472

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Q507.

Pens cost 43p and booklets cost £1.85

How much change will I get from £10 if I

buy 3 pens and 4 booklets?

Q508.

Here is Claire's homework. She got it all

correct.

Unfortunately she spilt some ink on the book.

What are the numbers or signs hidden by the

ink?

$$\blacksquare \times 10 = 2.3$$

$$2.3 \blacksquare 100 = 0.023$$

$$448 \div \blacksquare = 8$$

$$\blacksquare + 37 = 162$$

Q509.

Write down the numbers the arrows point to.

Q510.

Work out:

23.45 − 0.333 − 4.567 − 0.005
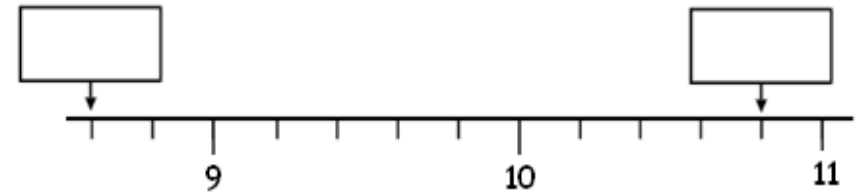
Q511.

Work out:

345.12 + 0.34 + 0.1 + 0.987 + 87.12345

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Q512.

Here is a shape:

24 cm

7 cm

9 cm

13 cm
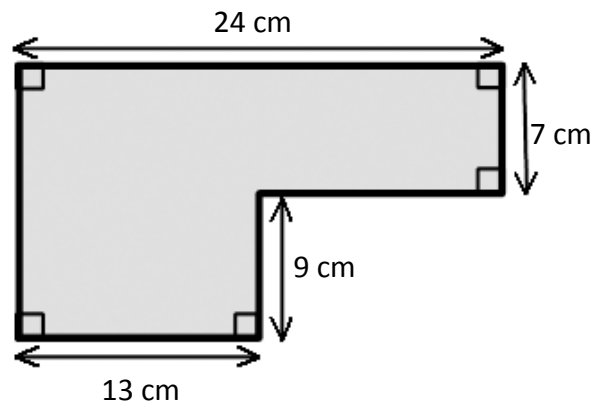
a) Work out the perimeter of the shape.

b) Work out the area of the shape.

Q513.

Liam has a box of 700 beads.

He uses 27 beads to make one necklace.

How many full necklaces can he make?

Q514.

The temperatures recorded on a winter's day in five different European cities are shown below:

-11°C   17°C   8°C   -3°C   -6°C

What is the difference in temperature between the hottest and coldest cities?

Q515.

On the grid shown, A is the point (3, 2).
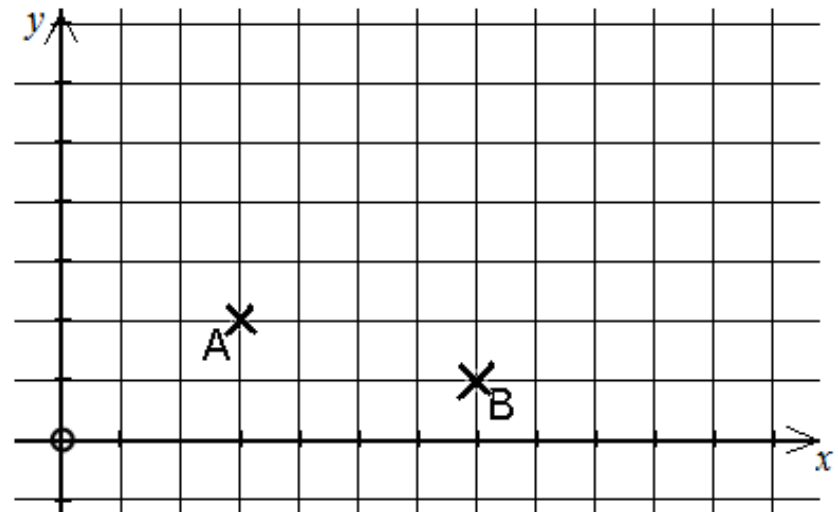
a) Write down the coordinates of the point B.

b) On the diagram, mark two crosses, C and D, so that ABCD is a square.

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Q516.

Work out the missing number so that the equation balances.

$$8 \times 9 - 17 = 7 \times 5 + ?$$

Q517.

On a long straight road there are four villages which are shown in the diagram below.

Allwood   Bentham   Corford   Dunbar

←5km→

← 22km →

←13km→
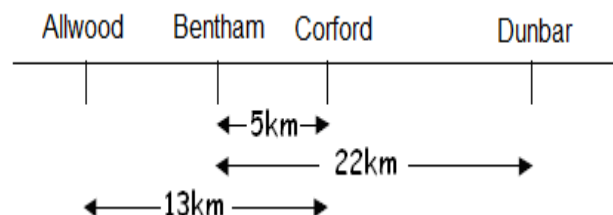
The arrows show the distances between the villages.

Find the distances from:

a) Corford to Dunbar

b) Allwood to Dunbar

c) Claire walks from Bentham to Corford at an average speed of 2 km per hour. How long does the journey take?

Q518.

Reflect the grey shapes in the dotted line.

Q519.

A cake is in the shape of a cube. It is made up of five layers of equal thickness, as shown in the diagram. Alternate layers are black and white. What fraction of the outside is black?
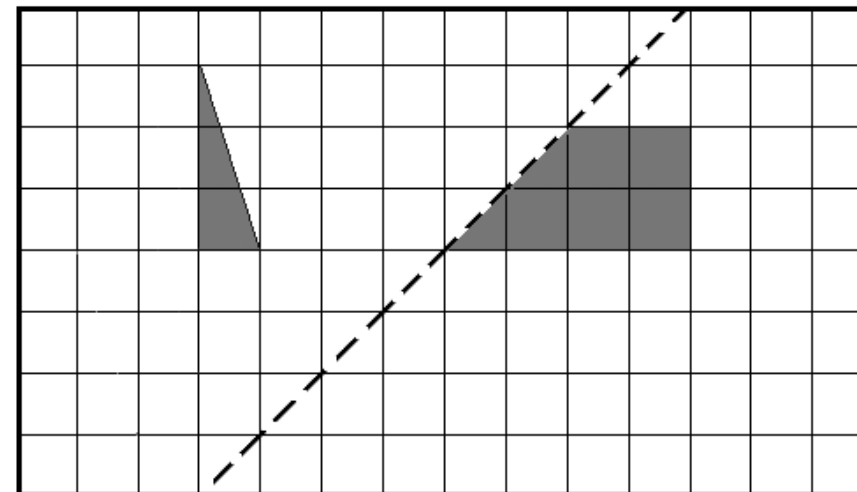
Q520.

A number of children are stood, evenly spaced, in a circle.

If the 4th child is opposite the 22nd child, how many children are in the circle?

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Q521.

The bar chart shows the number of repeat programmes shown by BBC1, BBC2 and ITV in one week.
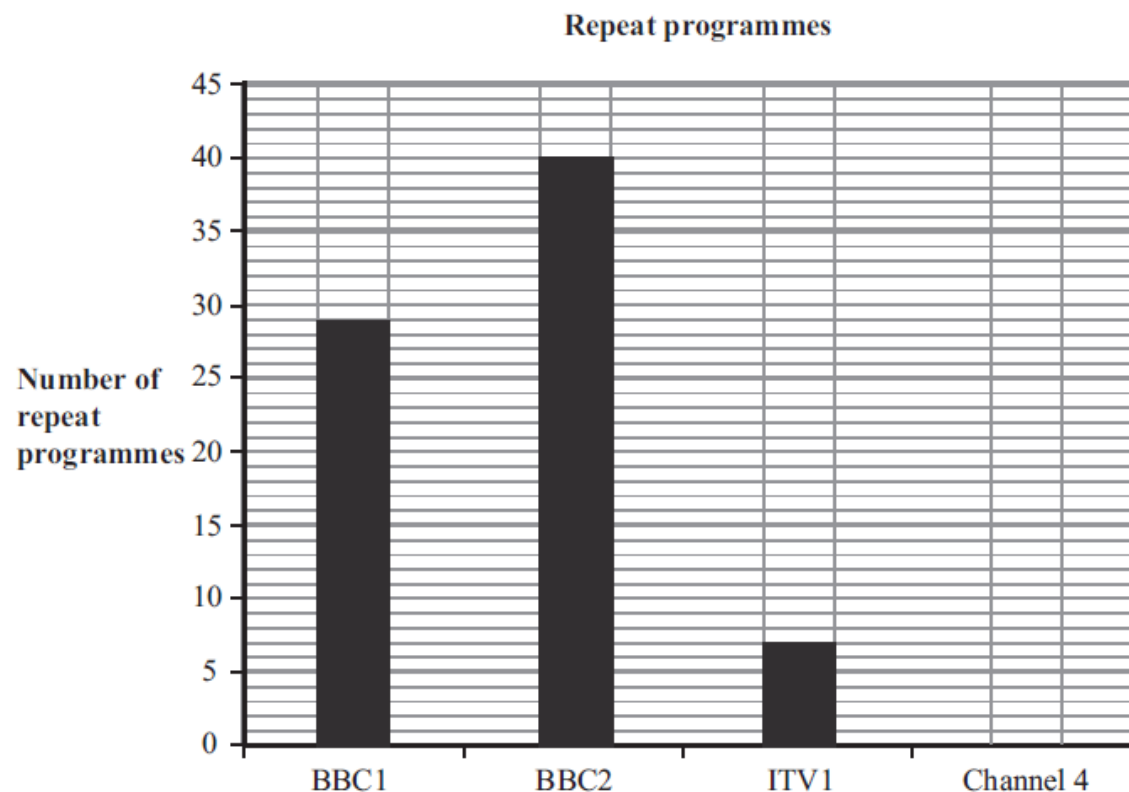
Repeat programmes

During the same week, Channel 4 showed 38 repeat programmes.

a) Complete the bar chart to show this information.

b) How many repeat programmes were shown altogether?

c) How many more repeat programmes were shown on BBC2 compared to BBC1?

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Q522.

Sarah wants to cover the floor of a room with a striped carpet.

A shop sells this carpet from a roll that is 3m wide at £25 per metre.

The floor is rectangular in shape with length 12m and width 8m.

3 m

9 m

12 m
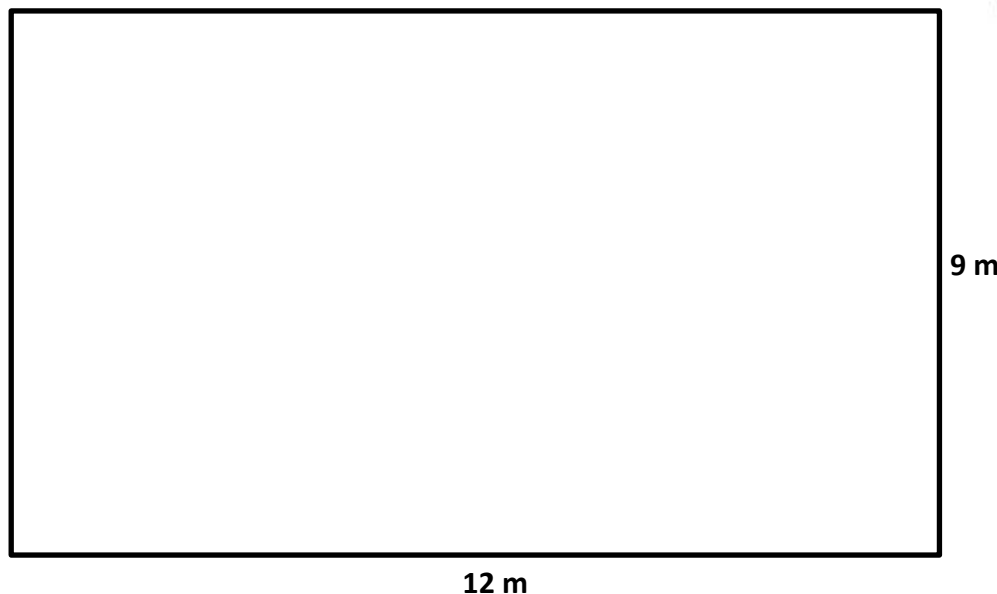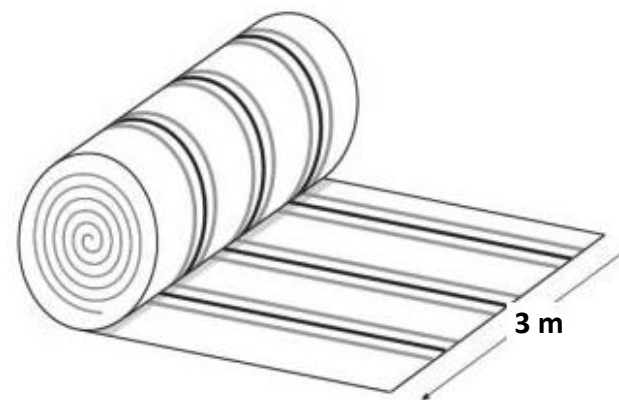
The carpet is laid to ensure that the stripes on the carpet are parallel to the longest sides of the room and lie in one direction only.

Find the cost of covering the floor.

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Q523.

Write down 45%

(a) As a decimal

(b) As a fraction in its lowest terms

Q524.

Work out:

$$2\frac{1}{3} + 5\frac{3}{4}$$

Q525.

Here is a list of decimals:

0.2, 1.8, 0.6, 0.8, 1.2

a) What is the range?

b) What is the median?

Q526.

The lengths of four of the Henry Potter films are as follows:

Henry Potter and the Philosopher's Loan 144 minutes

Henry Potter and the Pizza of Azkaban 158 minutes

Henry Potter and the Half Asleep Prince 146 minutes

Henry Potter and the Dodgy Shadows 135 minutes

Find the total length of all four films, giving your answer in hours and minutes.

Q527.

You are given two numbers 0.35 and $\frac{5}{8}$

a) Find the sum of these two numbers, write the answer as a fraction in its simplest form

b) Find the product of these two numbers, write the answer as a fraction in its simplest form

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Q528.

Three pupils had an average weight of 35kg.

a) What is the total weight of these three pupils?

A fourth pupil, weighing 55kg, joins them.

b) What is the average weight of this group of four pupils?

Q529.

Work out the following subtraction, giving your final answer as a mixed number in its lowest terms:

$$3\frac{5}{8} - 2\frac{2}{7}$$

Q530.

Write down the next two numbers in these sequences:

a) 11, 17, 23, 29, 35,

b) 108, 100, 92, 84, 76,

c) 4, 7, 12, 19, 28,

Q531.

a) What is the largest whole number that will divide into both 12 and 18?

b) Find the smallest whole number into which 12 and 18 will both divide.

Q532.
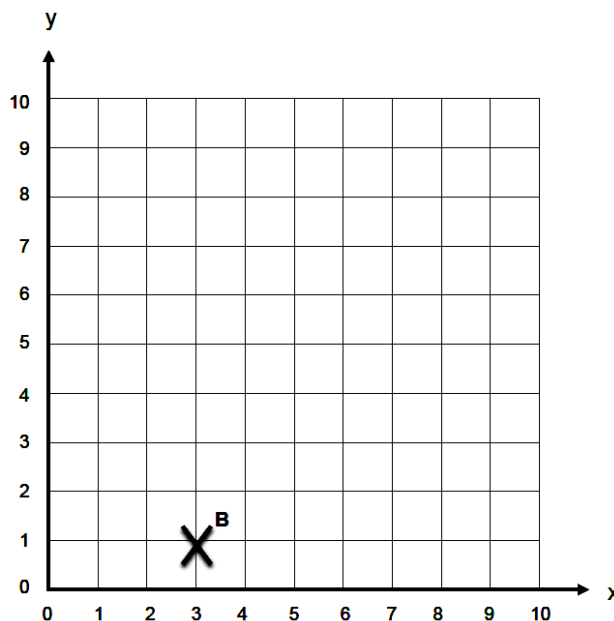
a) Write down the coordinates of point B.

b) Plot the point (1, 4) on the graph and label it A.

c) Plot the point (5, 4) and label it C.

d) Join points A, B and C to make a triangle. What type of triangle is triangle ABC?

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Q533.

Calculate 34.3 ÷ 0.7

Q534.

Write the number ninety nine thousand ninety nine hundred and ninety nine in figures.

Q537.

Calculate the size of the area left when a square of side length 2 metres is removed from the rectangle below.

8m

2m

2m

9m
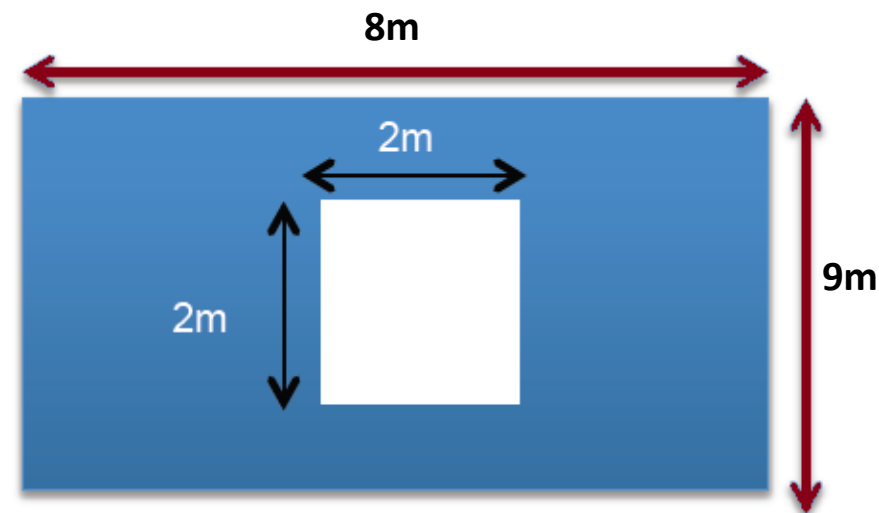
Q535.

How many days are there altogether in July, August and September?

Q536.

Which three prime numbers add up to 33?

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Q537.

What is three-quarters of a quarter?

Q538.

Find the sizes of angles x and y.

107°
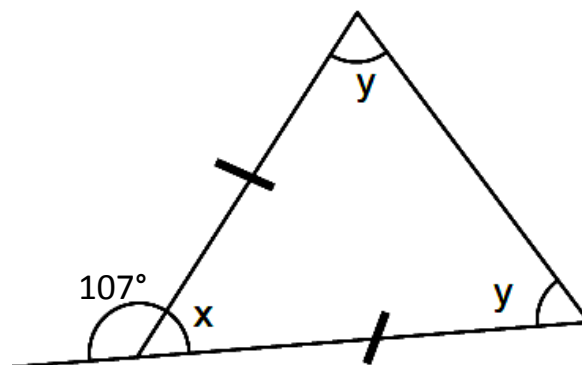
Q539.

13 friends win a prize of £385. They share the prize out equally in whole £1s (no pence). They give the remainder to charity. How much do they give to charity?

Q540.

321 × 57 = 18297

Use the answers to the multiplication above to answer the following questions:

(a) 18297 ÷ 57

(b) 570 × 3210

(c) 642 × 114

Q541.

If the name KATHRYN is written over and over again like this:

K A T H R Y N K A T H R Y N K A …

a)   What is the 17th letter?

b)   What is the 47th letter?

Q542.

Which is greater 90% of 10% of 300 or 80% of 20% of 200? You must show calculations to explain your answer.

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Q543.

One day, Postman Patrick recorded the number of houses which received no letters, one letter, two letters, and so on. This bar chart shows the results:
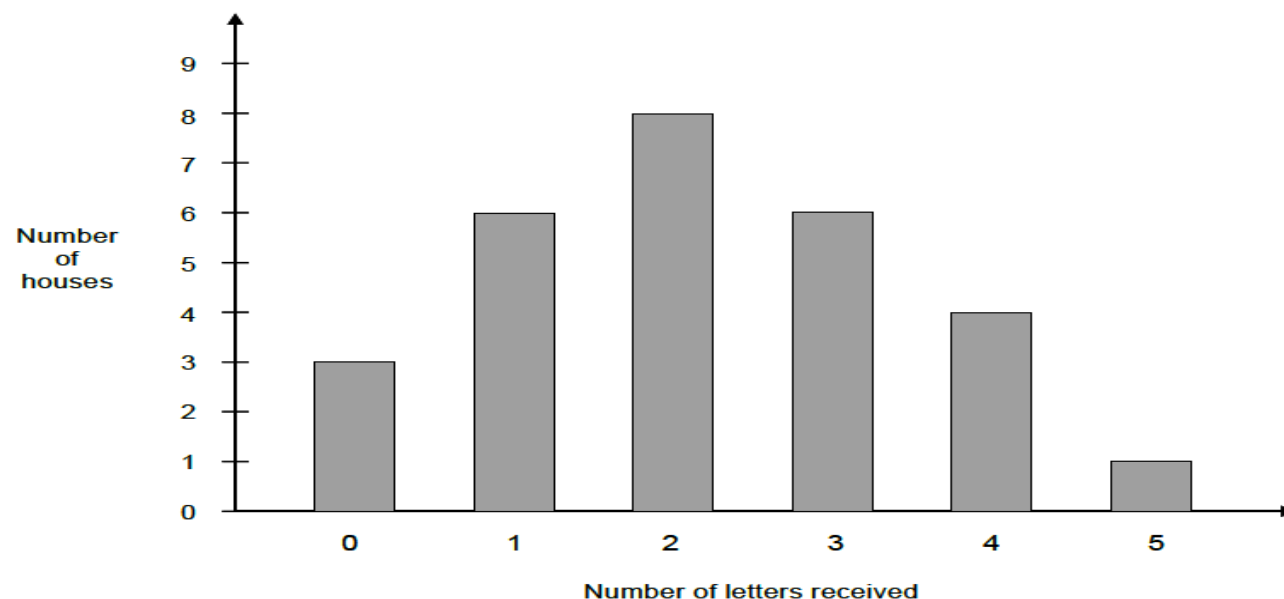
(a) How many houses received just one letter?

(b) What was the most common number of letters received?

(c) How many houses received fewer than three letters?

(d) What fraction of the houses received an odd number of letters?

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Q544.

The pie chart shows the mixture of trees in a wood. There are 280 trees altogether. How many of the trees are oak?
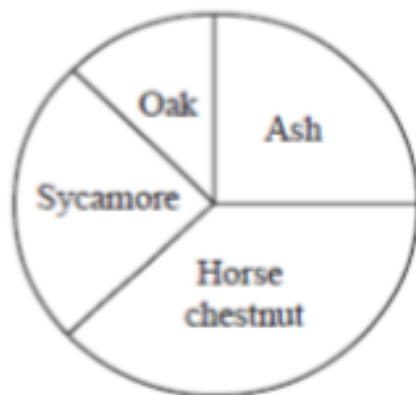
Q545.

In a restaurant, you can choose from two starters, three main meals and three desserts. How many possible meal combinations are there?

Q546.

Starting with -1 give each letter of the alphabet a consecutive number with alternate signs.

$A = -1, B = 2, C = -3,..., Z = 26$

My rabbit is called ANNA, what is the sum of the letters in her name?

Q547.

Shaded in 75% of the triangle below.

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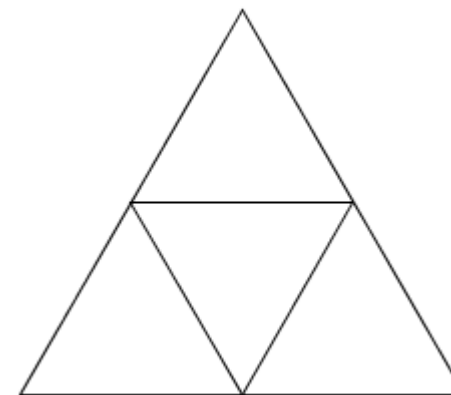
Q548.

Study this picture carefully. The number at the end of each row or column

is the sum of the values of the individual pictures.

a) Which has a higher value, a chicken or a kitten?

b) What is the value of a chicken?

c) What is the value of the question mark?

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Q549.

Mr Rich decided to share his wealth among his children. Richie as the oldest got 1/3, Thrifty the second oldest got a 1/3 of what was left, Bounty got ½ of what was left once Richie and Thrifty got their share. If Mr Rich shared £9 million pounds, how much did Bounty get?

Q550.

What is the reading on the measuring cylinder in litres?
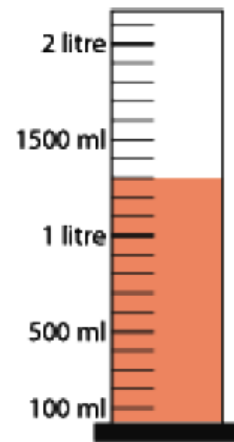
Q551.

Both of these nets fold to make a cube. Shade the squares that will be opposite the black squares when the nets are folded into a .
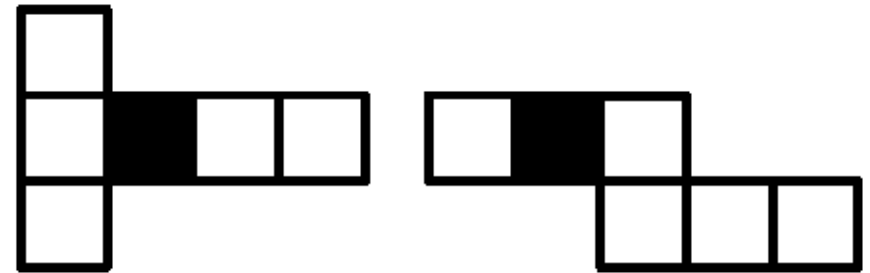
Q552.

What number is twelve less than eight thousand two hundred and seven?

Q553.

Shade in $\frac{1}{3}$ of this shape.
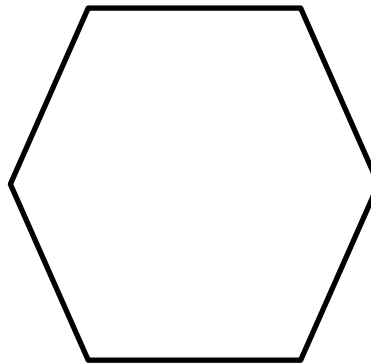
Q554.

Write down the mathematical name for each of these 2D shapes:

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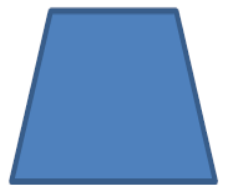
Q555.

What is the perimeter of this rectangle?

$2a + 3$

$5a + 2$
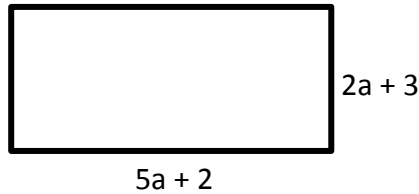
Q556.

Draw a net of a triangular prism.

Q559.

Here is a bar chart.

Ice Cream bought by Mr Gauss

The bar for strawberry is missing! Mr Gauss spent £17.50 on strawberry ice cream.

a) Draw a bar to show how much Mr Gauss spent on Strawberry ice cream.

b) How much did Mr Gauss spend on ice cream altogether?
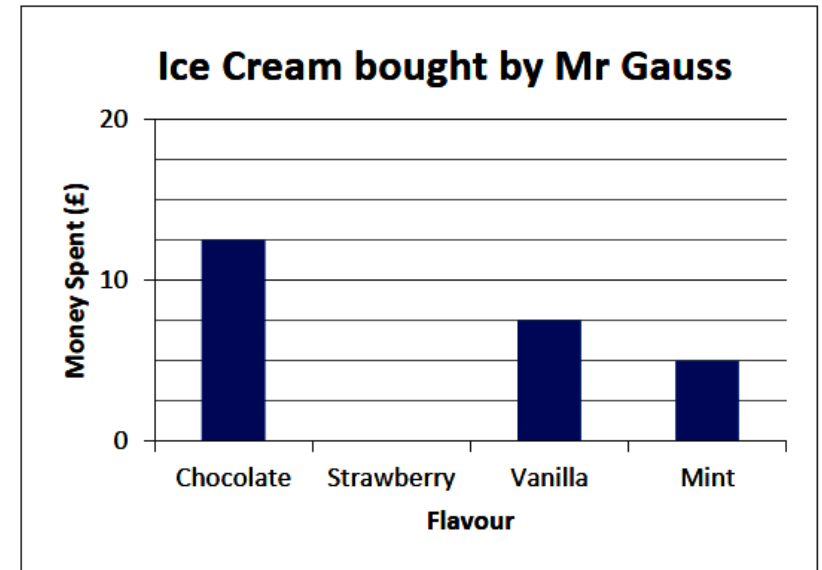
Q557.

What is the area of this shape? Give the appropriate units:

9cm

8cm

14cm
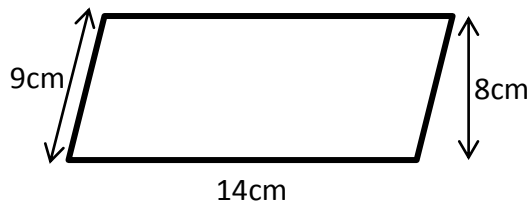
Q558.

On the way to school, Emma buys a carton of apple juice for 47p and on the way home, she buys a chocolate bar for 36p. If she does this every school day, how much would she spend in two weeks?

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Q560.

What ratio is equivalent to 36 : 216?

Q561.

Alisha saves £12 in January, £18 in February, £5 in March and £38 in April. What is her mean monthly saving?

Q562.

Find the area of the following shape.

14cm

8cm

9cm
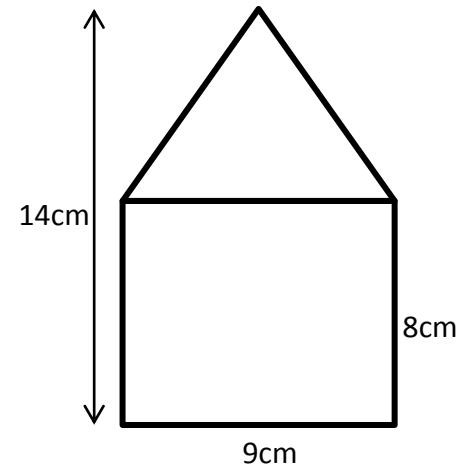
Q563.

You are told that 82 × 107 = 8774 Use this to work out the value of the following:

a) 8200 × 107

b) 8774 ÷ 107

Q564.

I get £8 pocket money every week. How much will I get in a year?

Q565.

Max has more than 4 apples but fewer than 7 apples. Alex has more than 5 apples and fewer than 8 apples. How many apples do Max and Alex have altogether?
Write down all the possible values.

4   5   6   7   8   9   10   11   12   13   14   15

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Q566.

B + A + T = 17

C + A + T = 25

C + O + A + T = 29

What is the value of B + O + A + T?

Q567.

A rectangle is 6cm longer than it is wide. Its perimeter is 32cm. Find its area.

Q568.

Work out the number from the following clues:

a) It is a whole number

b) It is less than 100

c) It is a square number

d) It is one less than a multiple of 5.

e) 16 is a factor of this number.

Q569.

How many days are there in three fifths of a year?

Q570.

15% of a circle needs to be shaded. How many degrees is this?

Q571.

What is the largest number of 15cm by 30cm by 20 cm shoe boxes that can fit in a 1m x 3m x 2m crate? Be careful – you can't chop up the shoe boxes!

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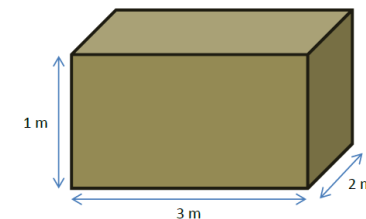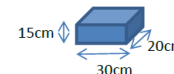
Q572.

Miss Lovelace writes the following pattern on the whiteboard:

$$6×6=36$$
$$5×7=35=36−1$$
$$4×8=32=36−4$$
$$3×9=27=36−9$$

a. Write down the next line of the pattern

…………… x ………….. = …………………………… = 36 − ……………….

Miss Lovelace says this works for other starting numbers as well and writes a second pattern

$$15×15=225$$
$$14×16=224=225−1$$
$$13×17=221=225−4$$

b. Complete the following line of the pattern

9 x …………… = ……….…………… = 225 − ……………………….

c. You are told that $137^2 = 18769$ Use this fact and the idea above to work out the value of

$$133 \times 141$$

(Note: Do not multiply 133 by 141)

Q573.

A theme park wants to make more money. The director thinks that if she reduces the ticket price by one-third, the number of people who come to the theme park will double.

a) In 2018, the park made £360 from ticket sales. Tickets were £4.50. How much money does the director think the theme park will make in 2019?

b) In fact, the theme park makes £390. How many more people went to the theme park in 2019 compared to 2018?

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Q574.

If the area of the rectangle is 48cm², what is the area of the triangle?
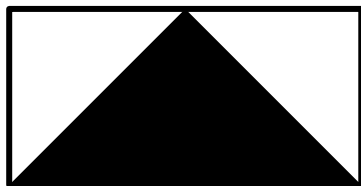
Q575.

Jaime has 83p. She has 6 coins, what could these coins be?

Q576.

This diagram shows a regular hexagon.
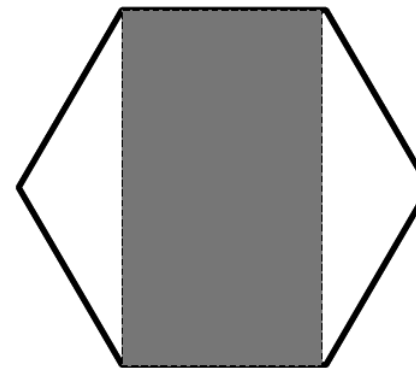
What fraction of the hexagon is shaded?
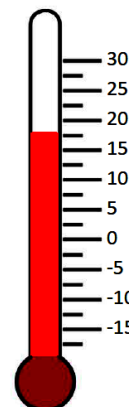
Q577.

Share £121 in the ratio 5:4:2

Q578.

What is the value of angle B?
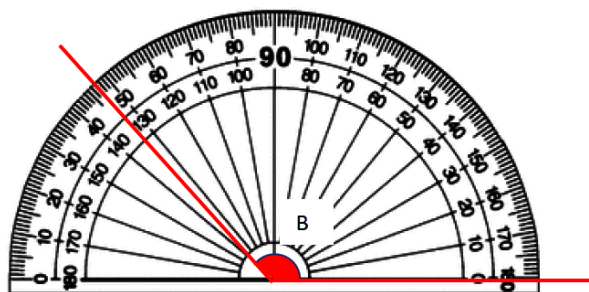
Q579.

What is the difference in temperatures shown by the thermometers.

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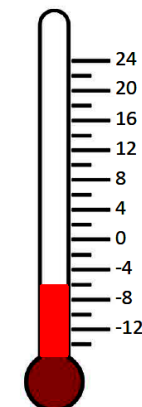
Q580.

Write down the number represented by

MCCCXIV

Q581.

Write as a decimal the amount of this shape that is shaded.

Q582.

There are 500 pupils at Maths school. There are 30 more girls than boys. How many girls are there?

Q583.

Simplify the following:

6a - 2b – 9a + 6b

Q584.

Identify the following shapes from their nets
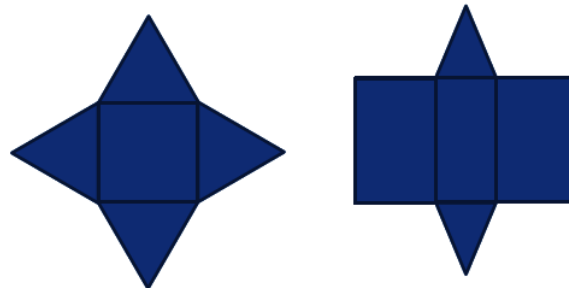
Q585.

Here are two shapes which have the same vertical height:

Shape A: 6 m (top), 10 m (bottom)

Shape B: 10 mm, 8 mm, 7 mm
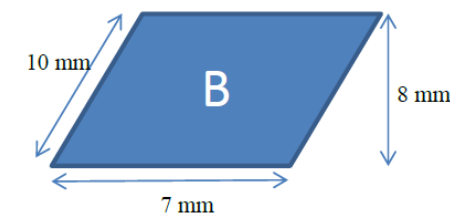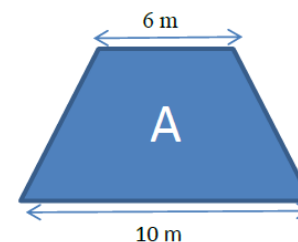
a) Work out the area of shape A

b) Find the perimeter of shape B

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Q586.

Jimmy paid a £50 deposit for a bike, then monthly payments of £25 each. The bike cost £275. How many monthly payments did Jake have to make to buy it?

Q587.

The sum of five consecutive whole numbers is 100. What is the smallest of these five numbers?

Q588.

Here are some numbers:

a) Write down all of the numbers which are prime

b) Write down all of the numbers which are square numbers

c) Write down all of the numbers which are multiples of 7

d) Write down all of the numbers which are cube numbers

Q589.

If you lose a quarter of a ninth of all your money, what fraction of your money have you lost?

Q590.

Find the area of the triangle. (1 square is worth 1cm²).

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Q591.

Shade in three squares so that the following shape has exactly one line of symmetry.
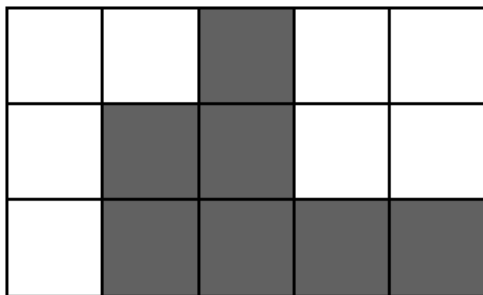
Q592.

How many pints are approximately the same as 4 litres?

5 pints   6 pints   7 pints   8 pints

Q593.

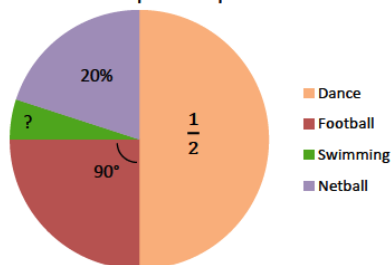Reflect the shaded shape in the mirror line.
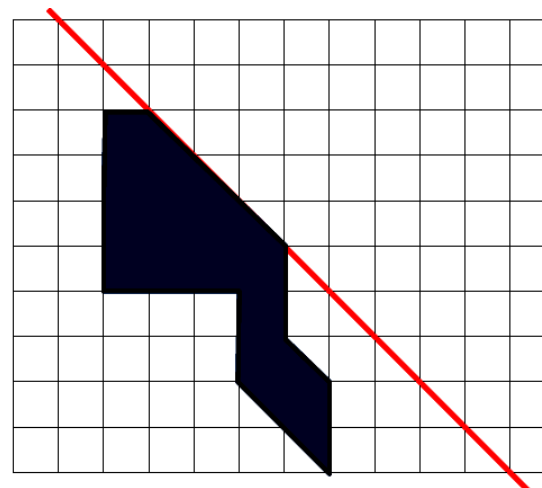
Q594.

Sara spent 1/3 of her money on a new top and 2/3 of the remainder on a skirt. She had £6 left. How much did Sara spend altogether?

Q595.

This pie chart represents 60 pupils. How many pupils do swimming?

**Favourite Sport Option**

- Dance
- Football
- Swimming
- Netball

Q596.

It takes Arthur 8 minutes to paint 1m² of wood. How long will it take Arthur to paint all the surfaces of this wooden cube with side 2m in hours and minutes?

2m

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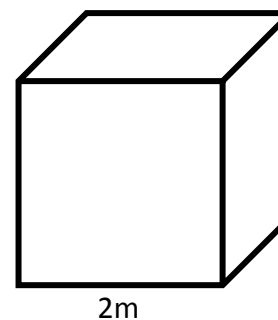
Q597.

Here is a graph showing how many cakes the Maths department sell to raise money for charity each year.

Number of cakes sold by the Maths department
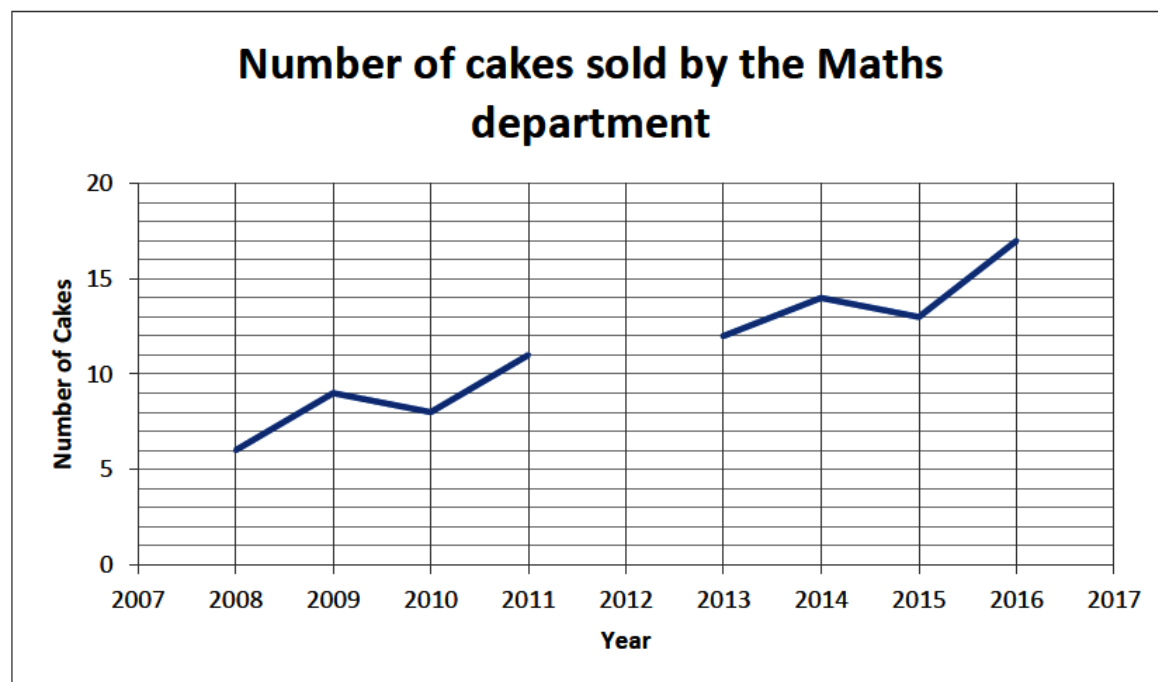
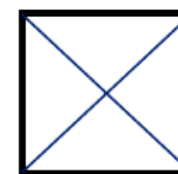In 2012, the Maths department forgot to ice their cakes and sold only three cakes!

a) Complete the graph

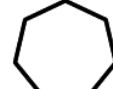b) How many more cakes did the Maths department sell in 2015 than 2010?

Q598.

A diagonal is a line joining two vertices (corners) of a shape that is not an edge of the shape.

a) Draw all of the diagonals on each shape. The first one has been done for you.
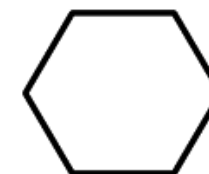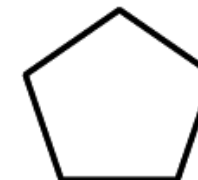
b) Complete the table

Shape	▢	⬠	⬡	⬡
Number of diagonals		5		

c) Use the pattern in the table to work out how many diagonals a ten-sided shape has.

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Q599.

It is 165 minutes before midnight. Put one digit into each of the four boxes to show the time on this 24-hour digital clock.

At Dev's shop, a multipack of 8 toilet rolls costs £2.40. At Mavah's shop, the cost per toilet roll is twice as much. How much is a pack of 3 toilet rolls at Mavah's shop?

Q600.

The sum of two numbers is 22 and their difference is 4. What are the two numbers?

Add the number of sides of a decagon to the number of sides of a pentagon, then multiply by the number of faces of a cuboid. What is your answer?