

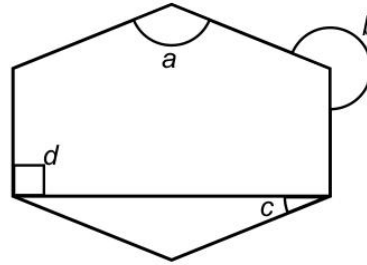
Question 1 - (4 marks available)

What name is given to each of the following angles?

- a) An angle of exactly 90°
- b) An angle between 90° and 180°
- c) An angle less than 90°
- d) An angle between 180° and 360°

Question 2 - (4 marks available)

Look at the angles marked a , b , c and d .
Write the letter of the angle alongside its special name.



acute angle

reflex angle

right angle

obtuse angle

Question 3 - (4 marks available)

Solve the following:

- a) $3x = 18$
- b) $2x = 9$
- c) $\frac{x}{5} = 7$
- d) $\frac{x}{2} = 6.5$

Question 4 - (4 marks available)

Work out the answers to:

- a) $4 - 7$
- b) $(-3) + 8$
- c) $9 - 11$
- d) $(-2) - 4$

Question 5 - (4 marks available)

Work out the answers to:

- a) $7 - 41$
- b) $(-15) + 33$
- c) $62 - 84$
- d) $(-26) - 14$

Question 6 - (4 marks available)

Work out the answers to:

- a) 3.2×6
- b) 8.5×0.2
- c) 2.7×5.9
- d) 0.32×0.16

Question 7 - (3 marks available)

Work out

- a) $1 + 2 \times 5$
- b) $3 \times 6 - 2 \times 4$
- c) $(4 + 14) \div 9$

Question 8 - (2 marks available)

Work out the answers to these questions.

- a) $401 - 82.6$
- b) $100.8 - 73.9$

Question 9 - (2 marks available)

Work out the answers to these questions.

a) $63 + 4.8 + 95.6$

b) $89.57 + 64 + 2.36$

Question 10 - (2 marks available)

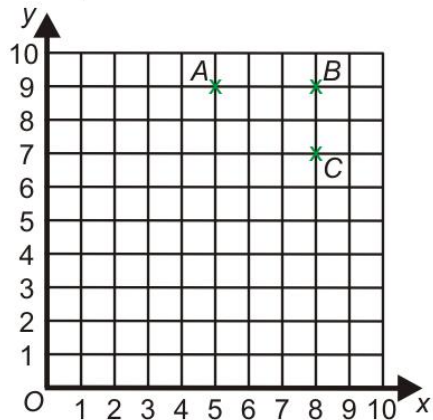
Kitchen tiles cost £2.75 each.

Work out the total cost of 62 tiles.

Question 11 - (1 marks available)

The points A , B and C are 3 corners of a rectangle.

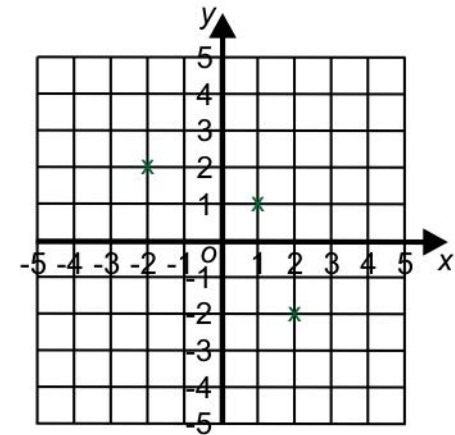
What are the coordinates of D , the 4th corner?



Question 12 - (2 marks available)

The diagram shows 3 vertices of a **parallelogram**.

Plot the 3 possible points for the 4th vertex.



Question 13 - (3 marks available)

Susie buys:

A pencil case for £3.99

A packet of pens for £2.49

A calculator for £4.99

She pays with a £20 note.

How much change should she receive?

Question 14 - (2 marks available)

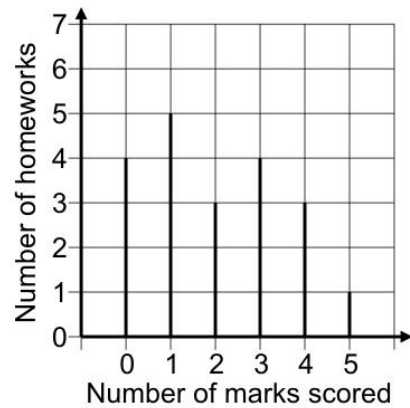
Oswald has £6.

He buys some cans of drink at 85p each and has 5p left over.

How many cans of drink did he buy?

Question 15 - (3 marks available)

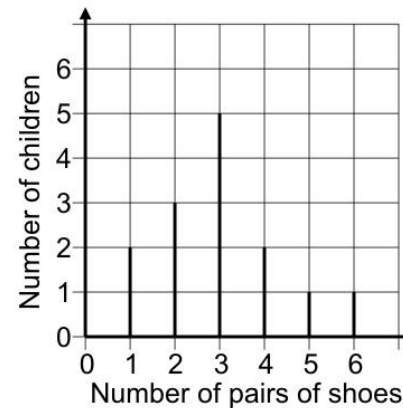
The line graph shows the number of marks Stacey scored in her homeworks.



- What was Stacey's modal score?
- What was Stacey's median score?
- What was Stacey's mean score?

Question 16 - (4 marks available)

The line graph shows the number of pairs of shoes owned by some children



- What is the modal number of pairs of shoes owned by the children?
- What is the median number of pairs of shoes owned by the children?
- What is the mean number of pairs of shoes owned by the children?

Question 17 - (3 marks available)

There are only red, blue and green counters in a bag.
There are 6 red counters.
There are 4 blue counters.
There are 8 green counters.

Matt takes a counter at random from the bag.

- a) What is the probability that the counter is red?
Give your answer as a fraction.
- b) What is the probability that the counter is **not** blue?
Give your answer as a fraction.

Question 18 - (2 marks available)

Write down all the factors of 24.

Question 19 - (1 marks available)

Find the Lowest Common Multiple of 8 and 6.

Question 20 - (2 marks available)

Pencils are sold in boxes of 10
Erasers are sold in boxes of 14
A teacher wants to buy the same number of pencils and erasers.

Work out the smallest number of boxes of each item she should buy.

Question 25 - (3 marks available)

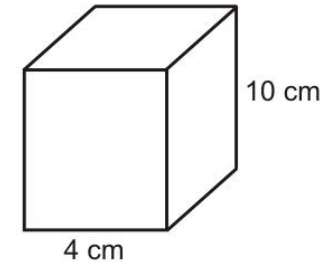
5% of a number is 23

1% of the same number is 4.6

Work out 16% of the number.

Question 26 - (2 marks available)

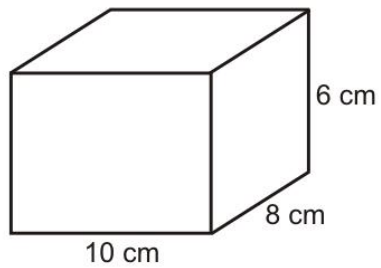
The diagram shows a square-based cuboid.



Work out the volume of the cuboid.
State the units of your answer.

Question 27 - (2 marks available)

Find the volume of this cuboid.



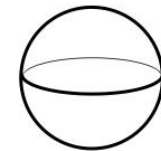
Question 28 - (4 marks available)

What are the mathematical names for these shapes?

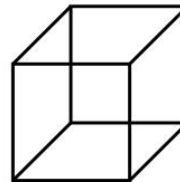
a)



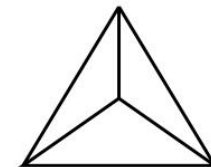
b)



c)

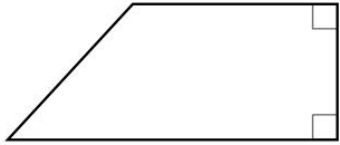


d)



Question 29 - (2 marks available)

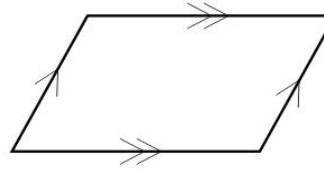
a) Write down the mathematical name of this shape.



b) How many faces does a cube have?

Question 30 - (2 marks available)

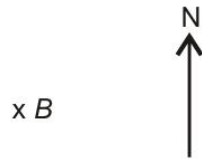
a) Write down the mathematical name of this shape.



b) How many faces does a cuboid have?

Question 31 - (4 marks available)

A and *B* are two cities.



a) Measure the bearing of *B* from *A*.

b) Measure the bearing of *A* from *B*.

Question 32 - (6 marks available)

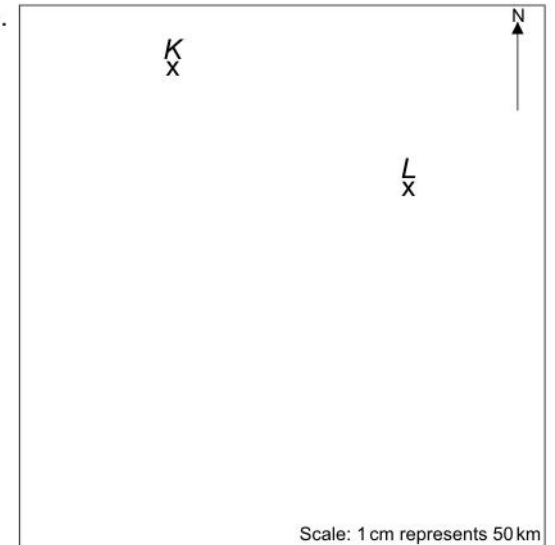
Towns *K* and *L* are shown on a map.

a) Work out the actual distance between towns *K* and *L*.

b) A third town, *M*, is 150 km due South of town *K*.

Mark *M* on the map with \times .

c) Measure the bearing of town *L* from town *K*.



Question 33 - (3 marks available)

a) Write the ratio

14 : 56

in its simplest form.

b) A jewellery shop sells 240 necklaces in a month.
180 of the necklaces were sold via the shop's website, the rest were sold in a high street shop.

Work out the ratio of online sales to shop sales.
Give your answer in its simplest form.

Question 34 - (2 marks available)

150 adults complete a survey.
80 are women.

Write the ratio men : women in its simplest form.

Question 35 - (4 marks available)

There are 80 people in a choir.
Half the people in the choir are women.

The number of men in the choir is one quarter of the number of women.
The rest of the people in the choir are children.

the number of children in the choir : the number of men in the choir = $n : 1$

Work out the value of n .
You must show how you get your answer.

$n =$

Question 36 - (2 marks available)

Sam and Bethan share £54 in the ratio 5 : 4

Work out how much each person gets.

Question 37 - (2 marks available)

Ivan and Tanya share £150 in the ratio 4 : 1

Work out how much more Ivan gets compared to Tanya.

Question 38 - (3 marks available)

Tim has some marbles.

Sue has twice as many marbles as Tim.

Jim has 15 marbles.

Tim, Sue and Jim have a total of 63 marbles.

How many marbles does Tim have?

Question 39 - (3 marks available)

Sue has 18 sweets.

Tony also has 18 sweets.

Sue gives Tony x sweets.

Sue then eats 5 of her sweets.

Tony then eats half of his sweets.

Write expressions for the number of sweets Sue and Tony now have.

Question 40 - (4 marks available)

a) Write 3.25×10^4 as an ordinary number.

b) Write 6.04×10^{-3} as an ordinary number.

c) Write 2 400 000 in standard form.

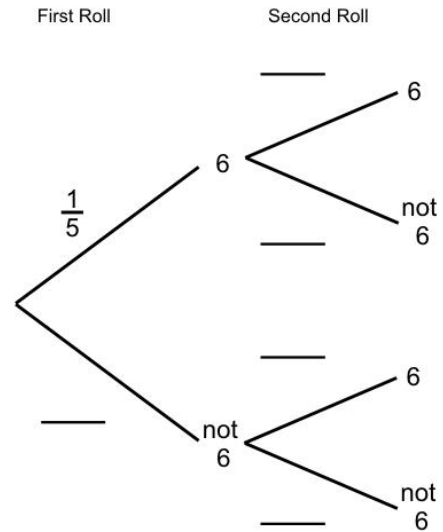
d) Write 0.00147 in standard form.

Question 41 - (2 marks available)

a) Work out $(8 \times 10^{-3}) \times (2 \times 10^{-4})$
Give your answer in standard form.

b) Work out $(6 \times 10^2) \div (3 \times 10^{-5})$
Give your answer in standard form.

Question 42 - (4 marks available)

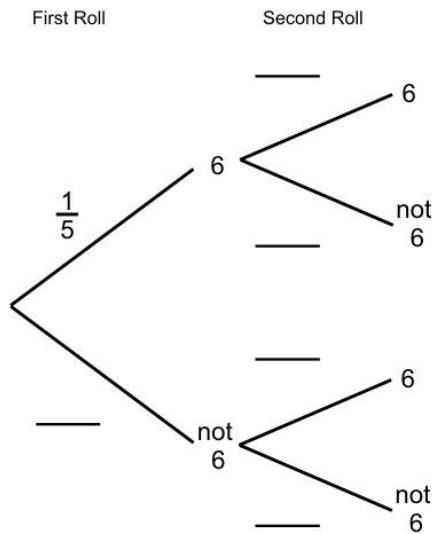


The probability of rolling a 6 on a biased dice is $\frac{1}{5}$

a) Complete the tree diagram.

b) Work out the probability of rolling two sixes.

Question 43 - (4 marks available)



The probability of rolling a 6 on a biased dice is $\frac{1}{5}$

a) Complete the tree diagram.

b) Work out the probability of rolling exactly one six.

Question 44 - (2 marks available)

Hamid has gained weight.
He now weighs 88 kg, which is 10% higher than his normal weight.

What is Hamid's normal weight?

Question 45 - (2 marks available)

Terry sees this offer.



How much was the phone before the discounted price?

Question 46 - (2 marks available)

In a sale, normal prices are reduced by 10%.
Nathalie bought a pair of shoes in the sale for £54.

What was the original price of the shoes?

Question 47 - (4 marks available)

Use inverse operations to complete the second equation each time.

a) $13 + 42 = 55$ \longrightarrow $-$ $=$ 13

b) $29 - 19 = 10$ \longrightarrow $-$ $=$ 19

c) $13 \times 5 = 65$ \longrightarrow \div $=$ 13

d) $72 \div 9 = 8$ \longrightarrow \div $=$ 9

Question 48 - (2 marks available)

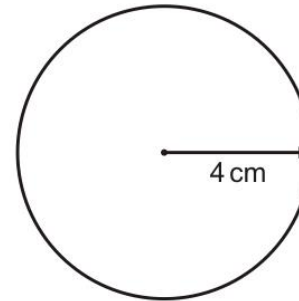
Use inverse operations to write one more correct number sentence for each of these:

a) $6 \times 8 = 48$

b) $29 - 15 = 14$

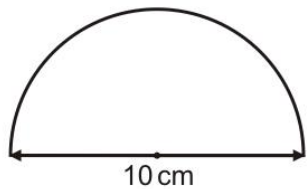
Question 49 - (2 marks available)

Work out the area of this circle.
Take π to be 3.142 and give your answer to 1 decimal place.



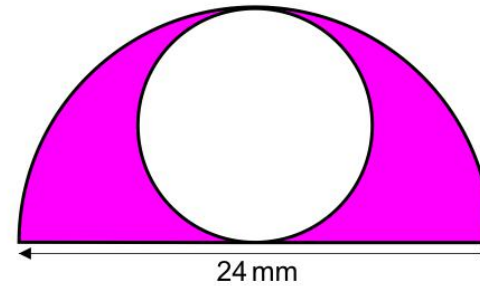
Question 50 - (3 marks available)

Work out the area of this semicircle.
Take π to be 3.142 and give your answer to 2 decimal places.



Question 51 - (5 marks available)

A circle fits inside a semicircle of diameter 24 mm.



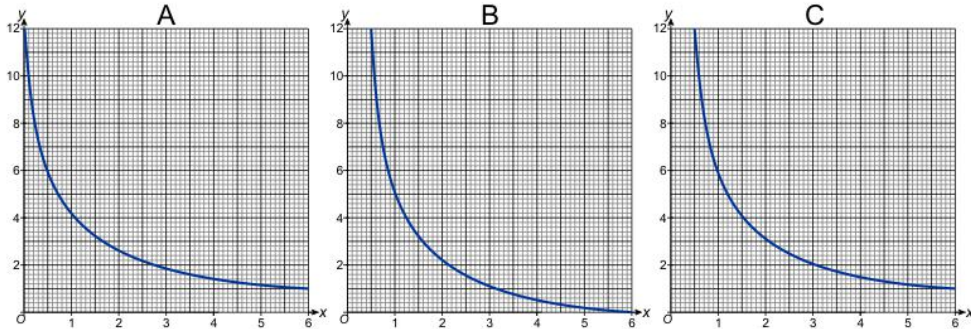
Calculate the shaded area.
Give your answer to 3 significant figures and state its units.

Question 52 - (3 marks available)

a) Complete the table of values for $y = \frac{6}{x}$

x	0.5	1	2	3	4	5	6
y		6	3			1.2	

b) Which of A, B or C is the correct curve for $y = \frac{6}{x}$?

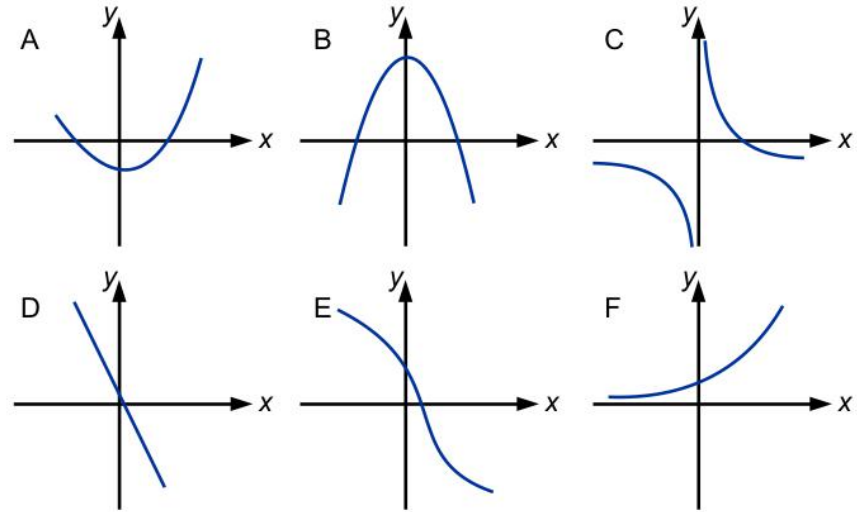


Question 54 - (2 marks available)

Rearrange $x = 3g + 2$ to make g the subject.

Question 53 - (1 marks available)

One of these graphs is of a reciprocal function. Which one is it?



Question 55 - (2 marks available)

Make y the subject of the formula

$$w = x^2 - 2yz$$

Choose the correct answer.

A $y = \frac{x^2 - w}{2z}$ B $y = \frac{w - x^2}{2z}$ C $y = x^2 - \frac{w}{2z}$

D $y = \frac{x^2 - w}{2z}$ E $y = \frac{w}{x^2} + 2z$

Question 56 - (2 marks available)

Expand and simplify $(x + 2)(x + 1)$

Question 57 - (2 marks available)

Expand and simplify $(x + 5)(x - 2)$

Question 58 - (3 marks available)

Work out

a) $\frac{4}{5}$ of 30

b) $\frac{2}{9} \times 45$

c) $24 \times \frac{1}{6}$