

Key Stage 4 Working from home pack - due

Question 1 - (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 2 - (2 marks available)

Dan used 942 units of electricity from July to October.
The meter reading in July was 32 347 units.

a) Work out the meter reading in October.

b) Each unit costs 14p.
How much do 942 units cost?

Question 3 - (2 marks available)

Write these fractions in their simplest forms:

a) $\frac{15}{20}$

b) $\frac{8}{12}$

Question 4 - (2 marks available)

Write these fractions in their simplest forms:

a) $\frac{2}{10}$

b) $\frac{9}{24}$

Question 5 - (3 marks available)

Here are some numbers:

2 9 14 36 40

- a) Which number is a multiple of 12?
- b) Which number is a prime number?
- c) Which number is a factor of 64?

Question 6 - (2 marks available)

Write down all the factors of 24.

Question 7 - (4 marks available)

Round the following numbers to 1 decimal place.

- a) 27.564
- b) 978.299
- c) 42.935
- d) 8.99

Question 8 - (2 marks available)

There are between 24 and 40 students in a class.

The ratio of boys to girls is 4 : 7

How many students are in the class?

Question 9 - (3 marks available)

a) Write the ratio

14 : 56

in its simplest form.

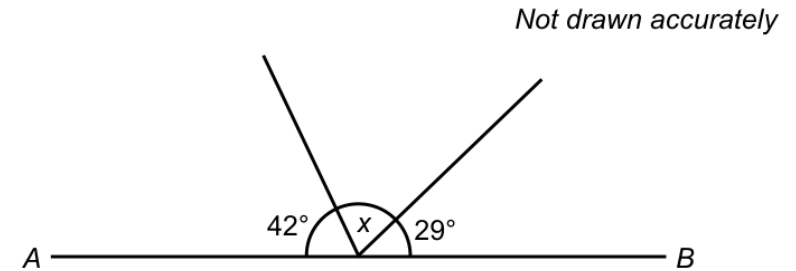
b) A jewellery shop sells 240 necklaces in a month.
180 of the necklaces were sold via the shop's website, the rest were sold in a high street shop.

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

Question 10 - (1 marks available)

AB is a straight line.

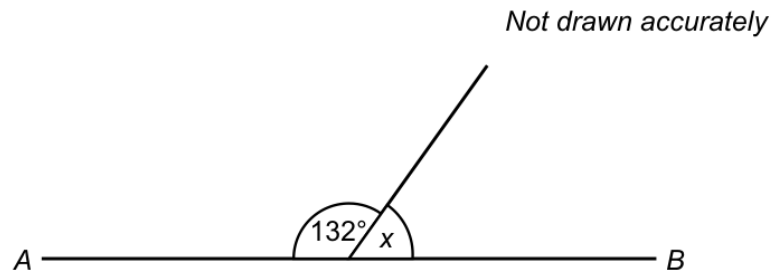
Work out the size of angle x .



Question 11 - (1 marks available)

AB is a straight line.

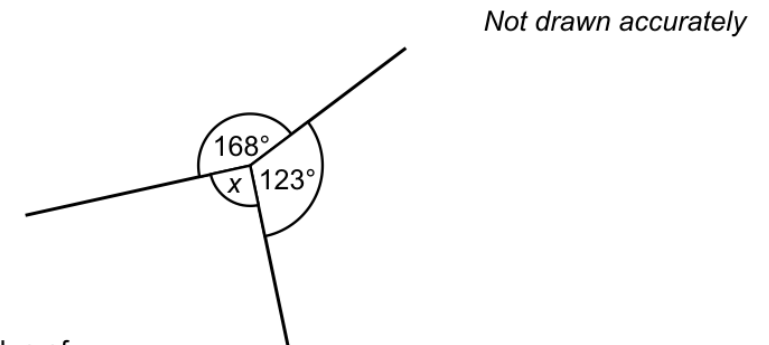
Work out the size of angle x .



Question 12 - (2 marks available)

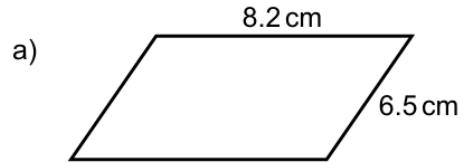
The diagram shows three angles at a point.

Work out the value of x .

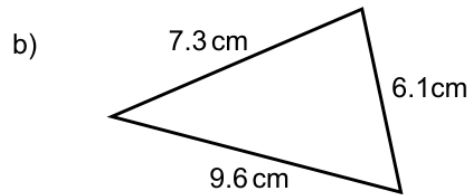


Question 13 - (2 marks available)

Find the perimeter of this parallelogram:

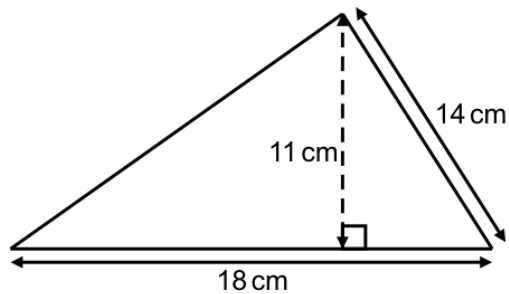


Find the perimeter of this triangle:



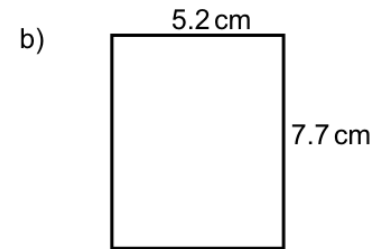
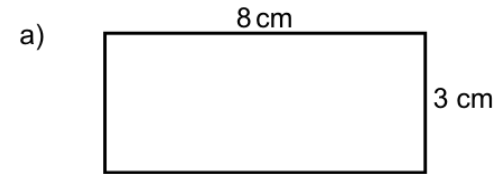
Question 15 - (2 marks available)

Calculate the area of this triangle.



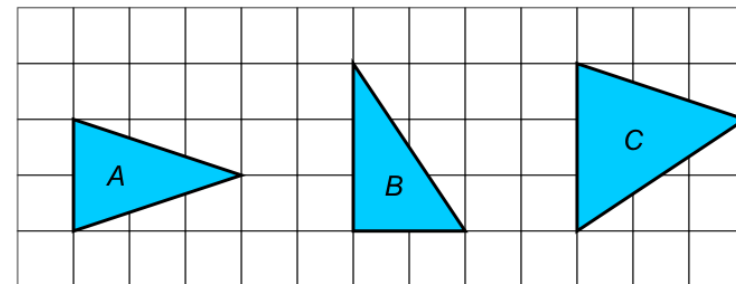
Question 14 - (2 marks available)

Calculate the areas of these rectangles.



Question 16 - (2 marks available)

Three triangles are shown on the centimetre grid.



- a) Which triangle has the largest area?
- b) Work out the area of this triangle.
Give your answer as a decimal.

Question 17 - (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 18 - (4 marks available)

Work out the answers to:

a) $5 \div 0.1$

b) $8 \div 0.02$

c) $2.4 \div 0.3$

d) $32 \div 0.16$

Question 19 - (2 marks available)

Work out

a) $5\frac{3}{4} - 2\frac{1}{4}$

b) $7\frac{2}{3} + 2\frac{1}{5}$

Note: To enter a mixed number in the answer boxes, please use the following method:

Type the fractional part of the mixed number first (e.g. for $6\frac{1}{5}$ first enter $\frac{1}{5}$)

Then use the keyboard arrows to return to the front of the box and type the whole number (e.g. for $6\frac{1}{5}$ enter 6).

Question 20 - (2 marks available)

Work out

a) $\frac{3}{4} \times \frac{1}{2}$

b) $\frac{4}{7} \times \frac{21}{40}$

Question 21 - (3 marks available)

Work out

a) $5 + 8 \div 2$

b) $4 \times 5 + 6 \div 3$

c) $7 \times (3 + 2)$

Question 22 - (2 marks available)

Express 80 as the product of its prime factors.
Write the prime factors in ascending order.

Question 23 - (2 marks available)

Find the Highest Common Factor of 18 and 12.

Question 24 - (1 marks available)

Find the Lowest Common Multiple of 8 and 6.

Question 25 - (2 marks available)

a) Find the square number

7 12 20 25 27

b) Find the cube number

7 12 20 25 27

Question 26 - (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 27 - (3 marks available)

Calculate

a) 83% of £408

b) 41% of 53kg

c) 97% of 345m

Question 28 - (4 marks available)

Calculate

a) 20% of £150

b) 15% of 80 kg

c) 85% of 2 500 m

Question 29 - (4 marks available)

- a) Round 4382 to 1 significant figure.
- b) Round 25446 to 1 significant figure.
- c) Round 38562.7 to 1 significant figure.
- d) Round 87600.2 to 1 significant figure.

Question 30 - (4 marks available)

Expand the following:

- a) $2(x + 3)$
- b) $5(2x - 4)$
- c) $4(2x + 1)$
- d) $6(x - 4y)$

Question 31 - (4 marks available)

Factorise fully the following:

- a) $2x + 10$
- b) $5x - 15$
- c) $8x + 6$
- d) $12x - 8$

Question 32 - (3 marks available)

Find the value of:

- a) $2x$ when $x = 5$
- b) $4y$ when $y = -3$
- c) $3z$ when $z = 1.2$

Question 33 - (3 marks available)

Find the value of:

a) x^2 when $x = 5$

b) y^2 when $y = -2$

c) z^2 when $z = 0.5$

Question 34 - (2 marks available)

Write down in terms of n , an expression for the n th term of the following sequences:

a) 2 5 8 11 14

b) 9 11 13 15 17

Question 35 - (3 marks available)

The n th term of a sequence is $3n + 2$

a) Work out the first three terms of the sequence.

b) Work out the tenth term of the sequence.

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 - (2 marks available)

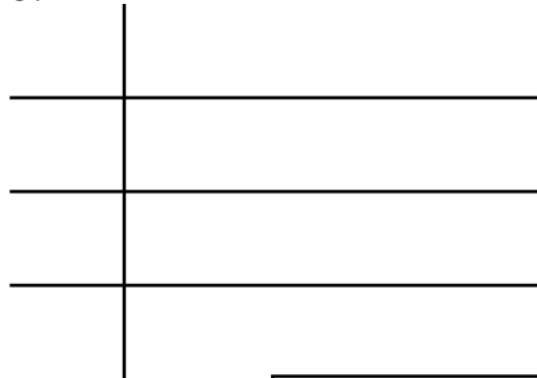
A TV costs £800 plus VAT at 20%.

What is the total cost of the TV?

Question 39 - (3 marks available)

Draw an ordered stem and leaf diagram to show this information.

3, 8, 12, 12, 14, 20, 21, 23, 26, 34



Key:
1|4 means

Question 40 - (2 marks available)

Work out the area of this circle.

Take π to be 3.142 and give your answer to 1 decimal place.

