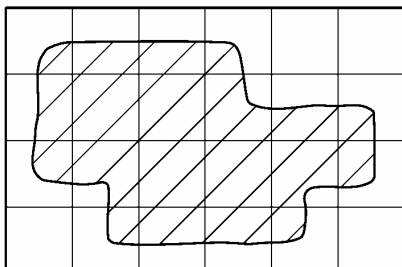


Question 1

The diagram represents the surface of a lake in winter. The lake is shaded on the grid.



- (a) Estimate the area, in cm^2 , of the diagram that is shaded.

Each square on the grid represents a square with sides of length 100m.

- (b) Work out the area, in m^2 , represented by one square on the grid.

- (c) Estimate the area, in m^2 , of the lake.

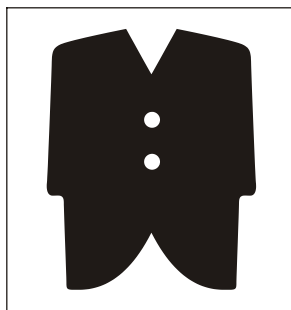
In summer the area of the lake decreases by 15%.

- (d) Work out the area, in m^2 , of the lake in summer.

Question 2

***LADIES'
JACKETS***

***70% Wool
30% Nylon***

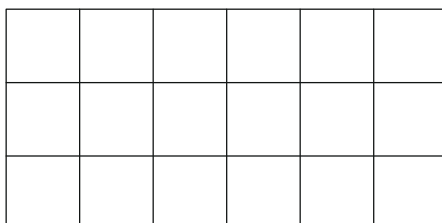


A jacket is 70% wool and 30% nylon.

- (a)** Write 70% as a decimal. **(1 mark)**
- (b)** Write 30% as a fraction.
Give your answer in its simplest form. **(2 marks)**
- (c)** Write down the ratio of wool to nylon. **(1 mark)**

Question 3

- (a) Shade $\frac{2}{3}$ of this shape.



(1 mark)

- (b) Write $\frac{3}{5}$

- (i) as a decimal,
(ii) as a percentage.

(2 marks)

- (c) (i) Write down **thirty one thousand three hundred and two** in figures.

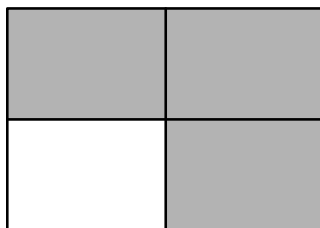
- (ii) Write down 13 820 to the nearest thousand.

(2 marks)

- (d) Explain how you would estimate 97×62 .

(2 marks)

Question 4



- (a) Write down the fraction of the shape that is **shaded**. (1 mark)
(b) Write down the percentage of the shape that is **unshaded**. (1 mark)

Question 5

Work out:

- (a) i) $\frac{5}{8}$ of £9.60
ii) 24% of 35 metres.
- (b) Change $\frac{3}{8}$ into
i) a decimal fraction,
ii) a percentage.

Question 6

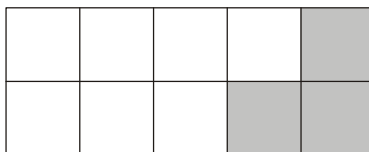
Frances sees three different advertisements for jeans.

Bob's Cut Price Jeans Normal price £30 Sale:- 15% off	DISCO'S JEANS Normal price £36 SALE PRICE $\frac{2}{3}$ Normal Price
Sanjay's Market Stall Jeans £22 + 17.5% V.A.T. <i>to be added</i>	

Work out the cost of the jeans in each advertisement.

- i) Bobs
- ii) Disco's
- iii) Sanjay's

Question 7



(a) What fraction of the shape is shaded? **(1 mark)**

(b) What percentage of the shape is shaded? **(1 mark)**

(c) Shade in more squares so that $\frac{4}{5}$ of the shape will be shaded. **(1 mark)**

Question 8

Sam wants to buy a Hooper washing machine.
Hooper washing machines are sold in three different shops.

<p><u>Washing Power</u></p> <p>$\frac{1}{4}$ OFF usual price of £330</p>	<p><u>Whytes</u></p> <p>20% OFF usual price of £320</p>	<p><u>Clean Up</u></p> <p>£210 plus VAT at $17\frac{1}{2}$ %</p>
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- (a) Work out the cost of the washing machine in the Washing Power shop.

Washing Power: £..... **(2 marks)**

- (b) Work out the cost of the washing machine in the Whytes shop.

Whytes: £..... **(2 marks)**

- (c) Work out the cost of the washing machine in the Clean Up shop.

Clean Up: £..... **(2 marks)**

Question 9

Peter gets 56 marks out of 80 for his test.
Work out his percentage mark for the test.

(2 marks)

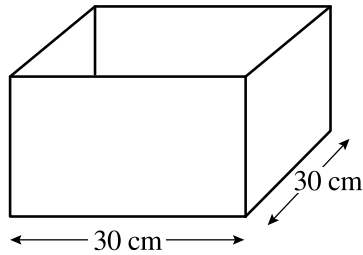
Question 10

Calculators are Us	Top Calculators
Model HX 130	Model HX 130
£7.50	£8.75
VAT not included	VAT included

Two shops sell the same make of calculator.
At **Calculators are Us**, the price of a calculator is £7.50 plus VAT.
At **Top Calculators**, the price is £8.75. This includes VAT.
VAT is charged at a rate of 17.5%.
Work out the difference in cost between the two prices.

(3 marks)

Question 11



Water is stored in a tank in the shape of a cuboid with a square base. The sides of the base are 30 cm long. The depth of the water is 20 cm.

(a) Work out the volume of the water, in cm^3 . **(2 marks)**

More water is put in the tank. The depth of the water rises to 21.6 cm.

(b) Calculate the percentage increase in the volume of water in the tank. **(3 marks)**

Question 12

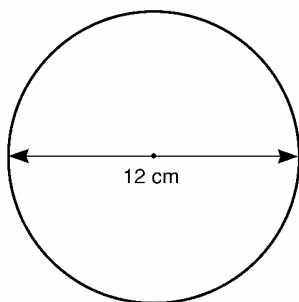
The same type of training shoes is advertised in three different shops.

Tom's Cheap Shoes £25 plus VAT at $17\frac{1}{2}\%$	Pete's Market Stall £48 with $\frac{1}{3}$ off	City of Shoes £40 with 25% discount
--	--	--

Work out the cost of the training shoes in each of the three shops.

Question 13

Some oil is spilt. The spilt oil is in the shape of a circle. The circle has a diameter of 12 centimetres.



- (a)** Work out the circumference, in cm, of the spilt oil. Give your answer correct to 1 decimal place.

The diameter of the spilt oil increases by 30%

- (b)** Work out the new diameter, in centimetres, of the spilt oil.

Question 14

The table below shows the monthly payment for an insurance scheme.
The payments depend on the age at which a person starts paying.
There are two rates, Standard Rate and Discount Rate.

Age	Monthly Payments per Person	
	Standard Rate in pounds	Discount Rate in pounds
0 - 16	7.20	6.12
17 - 19	12.60	10.71
20 - 39	17.00	14.45
40 - 59	23.40	19.89
60 - 74	41.40	35.19
75 and over	84.80	72.08

Alison is aged 17. She pays the Standard Rate.

- (a) i) Write down Alison's monthly payment.
ii) Work out the total amount Alison will pay in a year.

Mr Masih pays at the Discount Rate.

He pays £19.89 each month.

If he were one year older, he would pay £35.19 each month.

- (b) How old is Mr Masih?

The standard monthly payment for an insurance scheme for Tom is £7.20.

This is reduced for the Discount monthly payment to £6.12.

- (c) Work out the percentage reduction.

Question 15



The cash price of the saxophone is £740.

Tom buys the saxophone using a Credit Plan.

He pays a deposit of 5% of the cash price and 12 monthly payments of £65.

Work out the difference between the cost when he used the Credit Plan and the cash price.

(2 marks)

Question 16

A school buys a trampoline.

The school is given a discount of $\frac{1}{8}$ of the price.

- (a) Write $\frac{1}{8}$ as
- i) a decimal
 - ii) a percentage

(2 marks)

The price of the trampoline is £3218.

- (b) Work out the price the school actually has to pay.

(3 marks)

Question 17

Sue buys a pack of 12 cans of cola for £4.80.

She sells the cans for 50p each.

She sells all the cans.

Work out her percentage profit.



..... %

(3 marks)

Question 18

Jo did a maths test.
There was a total of 40 marks for the test.
Jo got 65% of the marks.

(a) Work out 65% of 40. **(2 marks)**

Jo got 36 out of 80 in an English test.

(b) Work out 36 out of 80 as a percentage.
..... % **(2 marks)**

Question 19

Work out 20% of 1800. **(2 marks)**

Question 20

The price of a box of chocolates is £4.32

There are 24 chocolates in the box.

- (a) Work out the cost of **one** chocolate.

..... p
(3 marks)

Special offer.

Buy **one** box of chocolates for £4.32

Buy a **second** box of chocolates for half price.

George buys two boxes of chocolates on the special offer.

- (b) Work out the total amount George should pay for the two boxes of chocolates.

£
(2 marks)

18 of the chocolates in the box are milk chocolates.

- (c) Work out 18 as a percentage of 24.

..... %
(2 marks)