Maths GCSE SIL

Percentages

Watch this video – make notes / copy examples

https://www.mathsgenie.co.uk/percentages.html

Now complete these questions

Q1.

David is going to buy a cooker.
The cooker has a price of £320
David pays a deposit of 15% of the price of the cooker.

How much money does David pay as a deposit?

£ .....

(Total for Question is 2 marks)

Q2.

There are 210 counters in a bag.

30% of these counters are red.

Work out the number of red counters in the bag.

.....

(Total for question = 2 marks)

Q3.

Azmol is paid £1500 per month.
He is going to get a 3% increase in the amount of money he is paid.

Work out how much money Azmol will be paid per month after the increase.

£ .....

(Total for question = 2 marks)

Q4.

Adam gets a bonus of 30% of £80
Katy gets a bonus of £28

Work out the difference between the bonus Adam gets and the bonus Katy gets.

£ .....

(Total for question = 3 marks)

Q5.

There are 800 students at a school.
Each student has either a school dinner or a packed lunch.

31% of the students have packed lunches.

55% of the students are boys.
60% of the boys have school dinners.

How many girls have packed lunches?
You must show all your working.

.....

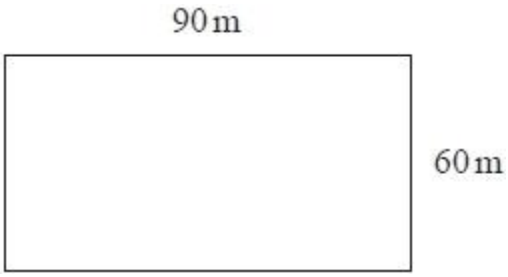
(Total for question = 4 marks)

Q6.

A garden is in the shape of a rectangle 90 m by 60 m.

Flowers are grown in 40% of the garden.
The rest of the garden is grass.

Work out the area of the garden that is grass.



..... m^2

(Total for question = 4 marks)

Q7.

Bhavin buys a car in a sale.

Before the sale, the cost of the car was £6720
In the sale, the cost of every car is reduced by 20%.

Bhavin pays a deposit of £1500
He will pay the rest of the cost in 24 equal monthly payments.

Work out the amount of each monthly payment.
You must show all your working.

£ .....

(Total for question = 5 marks)

Conversions and units

Watch this video – make notes / copy examples

https://www.mathsgenie.co.uk/conversions-and-units.html

Now complete these questions

Q8. Change 3 metres into centimetres.

..... centimetres

(Total for question = 1 mark)

Q9. Change 350 centimetres into metres.

..... metres

(Total for question = 1 mark)

Q10. Change 530 centimetres into metres.

..... metres

(Total for question is 1 mark)

Q11. Change 1.5 kilometres to metres.

..... metres

(Total for question = 1 mark)

Q12. Change 1756 grams to kilograms.

..... kg

(Total for question = 1 mark)

Q13. Write a number on the dotted line to make the statement correct.

2.75 litres = ... millilitres

(Total for question = 1 mark)

Q14. Change 4500g to kg.

..... kg

(Total for question = 1 mark)

Q15.

(a) Change 365 cm into metres.

..... m

(1)

(b) Change 2.7 kg into grams.

..... g

(1)

(Total for question = 2 marks)

Q16.

(a) Write 3 metres in centimetres.

..... centimetres

(1)

(b) Write 4000 grams in kilograms.

..... kilograms

(1)

(c) Write 700 millilitres in litres.

..... litres

(1)

Q17. Shaun is 1.88 m tall. David is 6 cm taller than Shaun. How tall is David?

.....

(Total for question = 2 marks)

Q18. Lily has 3.4 kg of flour. She uses 500 grams of the flour.

How much flour does Lily have left?

.....

(Total for question = 2 marks)

Q19. Sameena has 10 m of ribbon on a reel.
She cuts 3 pieces of ribbon from the ribbon on the reel.

The lengths of the pieces are

41 cm
3.7 m
and 112 cm.

Work out how much ribbon Sameena will have left on the reel.

.....

(Total for question = 4 marks)

Solving equations

Watch these 3 videos – make notes / copy examples

https://www.mathsgenie.co.uk/solving-equations.html

Now complete these questions

Q20.

(a) Solve $x + x + x = 6$

$x =$ .....

(1)

(b) Solve $t + 5 = 20$

$t =$ .....

(1)

(c) Solve $4y = 36$

$y =$ .....

(1)

(d) Solve $\frac{1}{2}f + 5 = 12$

$f =$ .....

(2)

Q21.

(a) Solve $x - 5 = 17$

$x =$ .....

(1)

(b) Solve $\frac{m}{3} = 6$

m = ...

(1)

(c) Solve $5y + 7 = 24$

y = ...

(2)

Q22.

(a) Solve $3(2p - 5) = 21$

p =. . . . . .

(3)

(b) Solve $9x - 11 = 5x + 7$

x = ...

(3)

Q23.

Solve $3(x - 2) = x + 7$

x = ...

(Total for Question is 3 marks)

Q24.

(a) Solve $8f + 19 = 15$

$f =$ .....

(2)

(b) Solve $2c + 5 = c + 8$

$c =$ .....

(2)

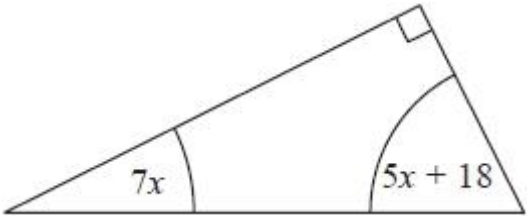
Q25. Solve $5x – 6 = 3(x – 1)$

$x =$ .....

(Total for question = 3 marks)

Q26.

The diagram shows a right-angled triangle.



All the angles are in degrees.

Work out the size of the smallest angle of the triangle.

..... °

(Total for question is 3 marks)

Expanding and factorising

Watch these 2 videos – make notes / copy examples

https://www.mathsgenie.co.uk/expanding-and-factorising.html

Now complete these questions

Q27.

(a) Expand $5(m + 2)$

.....

(1)

(b) Factorise $y^2 + 3y$

.....

(1)

Q28.

(a) Expand $4(3x + 5)$

.....

(1)

(b) Expand and simplify $2(x – 4) + 3(x + 5)$

.....

(2)

Q29.

(a) Expand $3(2 + t)$

.....

(1)

(b) Expand $3x(2x + 5)$

.....

(2)

Q30.

Expand and simplify $5(p + 3) – 2(1 – 2p)$

.....

(Total for question = 2 marks)

Q31.

(a) Factorise $4x + 10y$

.....

(1)

(b) Factorise $x^2 + 7x$

.....

(1)

Q32.

(a) Factorise $3x + 6$

.....

(1)

(b) Expand and simplify $5(y − 2) + 2(y − 3)$

.....

(2)

Q33.

(a) Factorise $5 − 10m$

.....

(1)

(b) Factorise fully $2a^2b + 6ab^2$

.....

(2)