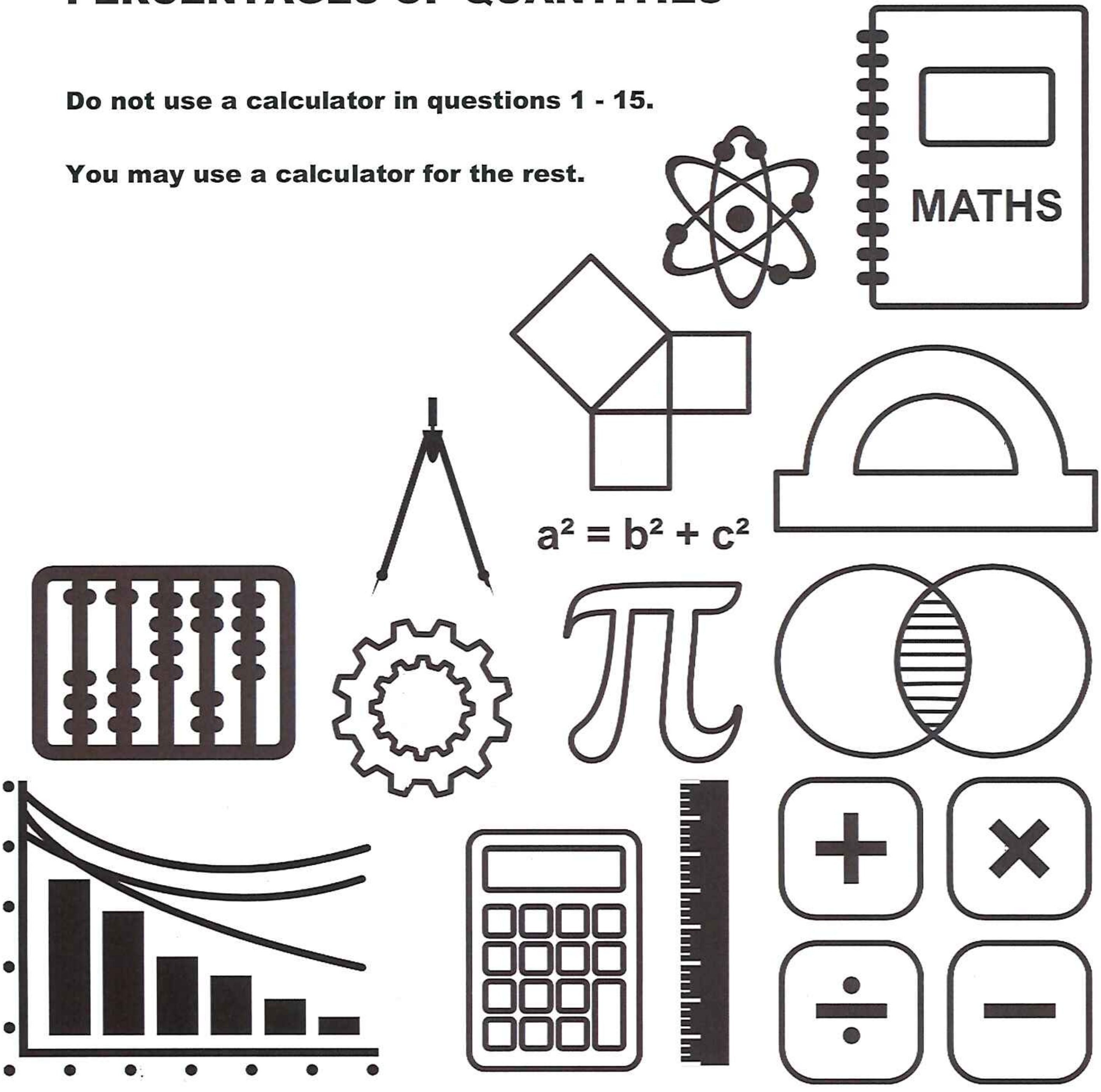
MATHSDIY

SOLUTIONS

GCSE TOPIC BOOKLET
PERCENTAGES OF QUANTITIES

Do not use a calculator in questions 1 - 15.

You may use a calculator for the rest.



1. Find 20% of £60.

100% = £60
10% = £6
20% = 2× £6 = **£12**

[2]

2. Calculate 6% of 400.

100% = 400
1% = 4
6% = 6×4 = **24**

[2]

3. Calculate 3% of 500.

100% = 500
1% = 5
3% = 3×5 = **15**

[2]

4. 7% of 500.

100% = 500
1% = 5
7% = 7×5 = **35**

[2]

5. Calculate 8% of 300.

100% = 300
1% = 3
8% = 8×3 = **24**

[2]

6. Find 55% of 80.

100% = 80
50% = 40
10% = 8
5% = 4
55% = 40+4 = **44**

[2]

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7. Find 70% of 60.

100% = 60
10% = 6
70% = 7×6 = 42

[2]

8. Calculate 75% of £562.80.

$75\% = \frac{3}{4}$

$\frac{3}{4}$ of £562·80. Find $\frac{1}{4}$ first

$4 \overline{)562.80}$ = 140.70

$\frac{3}{4} \rightarrow$ £140·70 × 3 = 422.10

£422·10

[2]

9. Oliver is paid £840 a year in his part-time job.
He gets a pay rise of 5%.
How much, in £, is this pay rise?

100% = 840
10% = 84
5% = 42

£42 pay raise

[2]

10. In a sale, a television priced at £450 is sold at a discount of 15%.
Find the value of this discount.

100% = 450
10% = 45
5% = 22·50

$\left.\begin{matrix}10\% = 45 \\ 5\% = 22{\cdot}50\end{matrix}\right\} +$ £67·50

£67·50 discount

[2]

11. The cost of a stand season ticket last year was £200. This year it has increased by 20%.
Find the cost of the stand season ticket this year.

100% = 200
10% = 20
20% = 2×20 = £40

Stand season ticket = £200 + £40 = £240

[3]

12. A dress, which costs £60 to make, is sold at a profit of 45%. What is the selling price of the dress?

100% = £60

10% = £6

40% = 4 × £6 = £24

5% = £3

$\left.\begin{array}{l} 40\% = £24 \\ 5\% = £3 \end{array}\right\}$ 45% = £27

Selling Price = £60 + £27 = £87

[3]

13. Jenny bought some jewellery, in a car boot sale, for £25.
She sold the jewellery to Alan and made a 30% profit.
How much did Alan pay for the jewellery?

100% = £25

10% = £2-50

30% = 3 × £2-50 = £7-50

Alan paid £25 + £7-50 = £32-50

[3]

14. Osian's wage is £850 each month.
This is increased by 4%.
Calculate his new monthly wage.

100% = £850

1% = £8.50

4% = 4 × £8.50 = £34

New monthly wage = £850 + £34 = £884

[2]

15. Wendy earns £1200 in her part-time job. She receives a pay rise of 4%.
How much is the pay rise in pounds?

100% = 1200

1% = 12

4% = 4 × 12 = 48

£48

[2]

Question 16 onwards, all calculator questions so change to decimal first, then multiply

16. What is 62% of 12.5?

$0.62 \times 12.5 = \underline{\underline{7.75}}$

[2]

17. Calculate 38% of £56.

$0.38 \times 56 = \underline{\underline{£21.28}}$

[2]

18. Calculate 36% of 72.

$0.36 \times 72 = \underline{\underline{25.92}}$

[2]

19. Calculate 46% of 54.

$0.46 \times 54 = \underline{\underline{24.84}}$

[2]

20. Calculate 36% of £158.

$0.36 \times 158 = \underline{\underline{£56.88}}$

[2]

21. Calculate 38% of 135.

$0.38 \times 135 = \underline{\underline{51.3}}$

[2]

22. Calculate 26% of 79.

$0.26 \times 79 = \underline{\underline{20.54}}$

[2]

23. In a shop, the marked price of a television is £542.
The shop offers a discount of 28% of the marked price.
Find the discounted price of the television.

$0.28 \times 542 = £151.76$

$£542 - £151.76 = £390.24$

$\underline{\underline{\text{Discounted price} = £390.24}}$

[3]