PERCENTAGES
EXAM-TYPE QUESTIONS

A1 A bank pays 2.5% interest on its current account. Write 2.5% as a decimal.	**A2** Rosie took a science test and scored 41 marks out of 45. Express 41 out of 45 as a percentage.	**A3** A school has 80 staff. 15% of the staff wear glasses. Calculate the number of staff that wear glasses.	**A4** 56% of students in a school are girls. There are 420 girls in the school. Work out the total number of students in the school.
B1 Ayesha plays hockey. Last year Ayesha scored 8 goals. This year Ayesha scored 13 goals. Calculate the percentage increase in for the number of goals scored.	**B2** Between 2001 and 2011, the population of a town increased by 8% In 2001 the population was 34 342. Calculate the population in 2011.	**B3** In a sale, normal prices were reduced by 20%. The normal price of a camera was £180. Work out the sale price of the camera.	**B4** Justin bought some clothes. The clothes should have cost £84.00 but he got a discount of 15%. Work out how much money Justin saved.
C1 Rohan invested £3000 for 4 years in a savings account. He was paid 2.5% per annum compound interest. How much did Rohan have in his savings account after 4 years?	**C2** Susanna invested £2000 for 3 years at 4% interest per annum compound interest. Work out the amount of interest Susanna had earned after 3 years.	**C3** Anya bought a car for £12 500. The car depreciates at a rate of 12% per year. Work out the value of the car after five years.	**C4** The price of shoes was increased by 15%. However, customers were given a 20% discount if they bought two pairs at the same time. Work out the cost of two pairs of shoes that originally cost £68 each.
D1 In a sale, normal prices were reduced by 25%. The sale price of a computer was £442. Work out the normal price of the computer.	**D2** In a sale, all prices are reduced by 15%. The sale price of a shirt is £22.40. Work out the original price of the shirt.	**D3** The price of a new TV is £540, which includes 20% VAT. Find the cost of the TV excluding VAT.	**D4** Natasha invested some money at 4% per annum compound interest. At the end of two years, the value of her investment was £3380. Find the amount of money that Natasha invested.

PERCENTAGES
EXAM-TYPE QUESTIONS

Ref: G318. **1R1**

A1

A bank pays 2.5% interest on its current account.

Write 2.5% as a decimal.

0.025

A2

Rosie took a science test and scored 41 marks out of 45.

Express 41 out of 45 as a percentage.

$\frac{41}{45} \times 100 = 91.1\%$

A3

A school has 80 staff.

15% of the staff wear glasses.

Calculate the number of staff that wear glasses.

$80 \times 0.15 = 12$

A4

Method 1 | Method 2

$56\% \equiv 420$ | $\frac{420}{0.56} = 750$

$1\% \equiv 7.5$

$100\% \equiv 750$

B1

Ayesha plays hockey.
Last year Ayesha scored 8 goals.
This year Ayesha scored 13 goals.

$13 - 8 = 5$ $\frac{5}{8} \times 100 = 62.5\%$

B2

Between 2001 and 2011, the population of a town increased by 8%
In 2001 the population was 34 342.

$34342 \times 1.08 = 37089$

B3

In a sale, normal prices were reduced by 20%. The normal price of a camera was £180.

Work out the sale price of the camera.

$180 \times 0.8 = £144$

B4

Justin bought some clothes.
The clothes should have cost £84.00 but he got a discount of 15%.

Work out how much money Justin saved.

$84 \times 0.15 = £12.60$

C1

Rohan invested £3000 for 4 years in a savings account. He was paid 2.5% per annum compound interest.

$3000 \times 1.025^4 = £3311.44$

C2

Susanna invested £2000 for 3 years at 4% interest per annum compound interest.

$2000 \times 1.04^3 = 2249.73$

$2249.73 - 2000 = £249.73$

C3

Anya bought a car for £12 500.

The car depreciates at a rate of 12% per year.

$12500 \times 0.88^5 = £6596.65$

C4

$68 \times 2 = 136$

$136 \times 1.15 = 156.40$

$156.40 \times 0.8 = £125.12$

D1

In a sale, normal prices were reduced by 25%. The sale price of a computer was £442.

$\frac{442}{0.75} = £589.33$

D2

In a sale, all prices are reduced by 15%.
The sale price of a shirt is £22.40.

$\frac{22.40}{0.85} = £26.35$

D3

The price of a new TV is £540, which includes 20% VAT.

Find the cost of the TV excluding VAT.

$\frac{540}{1.2} = £450$

D4

Natasha invested some money at 4% per annum compound interest.
At the end of two years, the value of her investment was £3380.

$\frac{3380}{1.04^2} = £3125$

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