



- 1 Write 0.7 as a fraction.

(1 mark)

0.7 means 7 tenths, which is $\frac{7}{10}$

$$\boxed{\frac{7}{10}}$$

- 2 Write 7% as a decimal.

(1 mark)

$$7\% = 7 \div 100 = 0.07$$

$$\boxed{0.07}$$

- 3 Write

- a. 0.4 as a percentage,
b. 135% as a decimal.

(2 marks)

a)

$$0.4 \times 100 = 40$$

$$\boxed{40\%}$$

b)

$$135 \div 100 = 1.35$$

$$\boxed{1.35}$$

- 4 Write 0.35 as a fraction. Give your fraction in its simplest form.

(1 mark)

$$0.35 = \frac{35}{100}$$

Divide top and bottom by 5

$$\frac{35}{100} = \frac{7}{20}$$

$$\boxed{\frac{7}{20}}$$

5

Write

a. 35% as a fraction in its simplest form,

b. $\frac{3}{25}$ as a percentage.

(2 marks)

a)

$$35\% = \frac{35}{100}$$

÷ top and bottom by 5

$$\frac{35}{100} = \frac{7}{20}$$

$$\boxed{\frac{7}{20}}$$

b)

× top and bottom by 4

$$\frac{3}{25} = \frac{12}{100}$$

$$\boxed{12\%}$$

6

a. There are 32 pupils in a Year 9 class. 12 of them walk to school. What fraction of the class walk to school? Give your answer in its simplest form.

b. Write 40 minutes as a fraction of 2 hours. Give your answer in its simplest form.

(2 marks)

a)

$$\frac{12}{32} = \frac{3}{8}$$

$$\boxed{\frac{3}{8}}$$

b)

same units first

$$2 \text{ hours} = 120 \text{ minutes}$$

$$\frac{40}{120} = \frac{1}{3}$$

$$\boxed{\frac{1}{3}}$$

- 7 Amir has £60 of birthday money. He spends 0.15 of it on a book.

Work out how much money Amir has left.

(2 marks)

"of" means $\times$

$$0.15 \times 60 = 9$$

the book costs £9

$$60 - 9 = 51$$

£51

- 8 Write these numbers in order of size, starting with the smallest.

$$\frac{2}{5} \quad 0.44 \quad 39\% \quad \frac{1}{4}$$

(2 marks)

Convert to decimals

$$\frac{2}{5} = 0.4, 0.44 = 0.44, 39\% = 0.39, \frac{1}{4} = 0.25$$

In order: 0.25, 0.39, 0.4, 0.44

So the order is $\frac{1}{4}$, 39%, $\frac{2}{5}$, 0.44

$\frac{1}{4}$, 39%, $\frac{2}{5}$, 0.44

- 9 Ellie scored 17 out of 20 in a French test. She scored 42 out of 50 in a Spanish test.

In which test did Ellie do better? You must show your working.

(3 marks)

French

$$\frac{17}{20} = \frac{85}{100} = 85\%$$

Spanish

$$\frac{42}{50} = \frac{84}{100} = 84\%$$

$$85\% > 84\%$$

French

- 10 The same jacket is sold in two shops.

Shop A: normal price £80, with $\frac{1}{5}$ off.

Shop B: normal price £84, with 25% off.

In which shop is the jacket cheaper, and by how much? You must show your working.

(4 marks)

Shop A discount

$$\frac{1}{5} \text{ of } £80 = £16, \text{ so the price is } £80 - £16 = £64$$

Shop B discount

$$25\% \text{ of } £84 = £21, \text{ so the price is } £84 - £21 = £63$$
$$£63 < £64, \text{ so the jacket is cheaper in shop B by } £1$$

Shop B, by £1 (Shop A: £64, Shop B: £63)

- 11 Express 0.7 as a fraction.

(2 marks)

$$\text{Let } x = 0.777..$$

$$\text{Then } 10x = 7.777..$$

Multiplying by 10 shifts the decimal one place, so the repeating tails now match.

Subtracting removes that entire matching infinite tail, leaving a whole number

Subtracting

$$10x - x = 7.777... - 0.777..., \text{ so } 9x = 7$$

$$\text{Therefore } x = \frac{7}{9}$$

$$\frac{7}{9}$$

- 12 Express 0.54 as a fraction in its simplest form.

(3 marks)

$$\text{Let } x = 0.545454..$$

$$\text{Then } 100x = 54.545454..$$

Subtracting

$$100x - x = 54, \text{ so } 99x = 54$$

$$x = \frac{54}{99} = \frac{6}{11} \text{ after dividing top and bottom by 9}$$

$$\frac{6}{11}$$