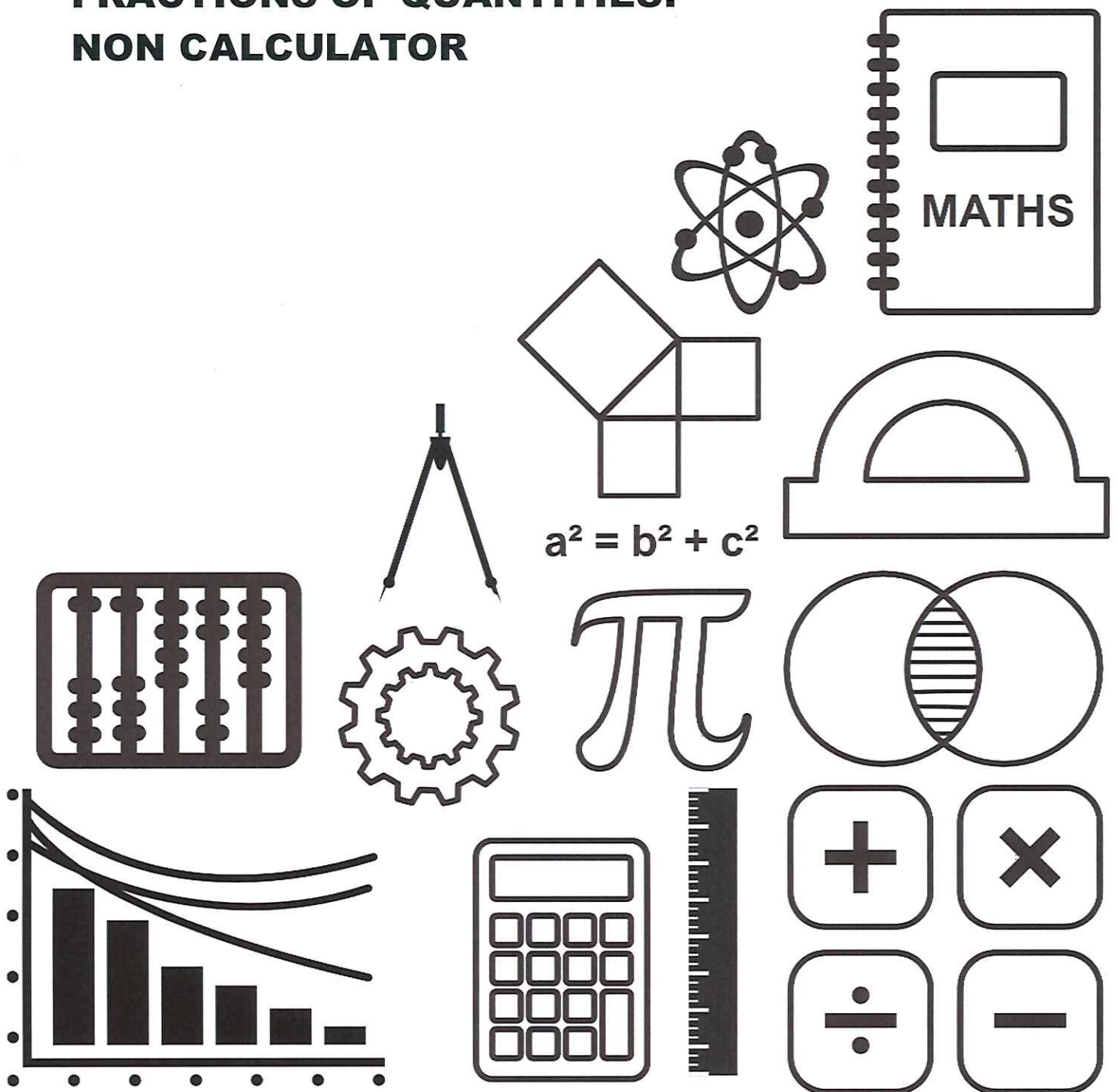


MATHSDIY

SOLUTIONS

GCSE TOPIC BOOKLET FRACTIONS OF QUANTITIES: NON CALCULATOR



1. Each month Simon earns £600 and he uses $\frac{1}{5}$ of this amount to repay a loan on his car. How much does Simon repay on his car each month?

$$5 \overline{)600} = \underline{\underline{120}}$$

[1]

2. Calculate $\frac{5}{9}$ of 45.

$$\frac{1}{9} \text{ of } 45 = 9 \overline{)45}$$

$$\frac{5}{9} \rightarrow 5 \times 5 = \underline{\underline{25}}$$

[2]

3. Calculate $\frac{5}{6}$ of 42.

$$\frac{1}{6} \text{ of } 42 = 6 \overline{)42}$$

$$\frac{5}{6} \rightarrow 5 \times 7 = \underline{\underline{35}}$$

[2]

4. Calculate $\frac{3}{8}$ of 48.

$$\frac{1}{8} \text{ of } 48 = 8 \overline{)48}$$

$$\frac{3}{8} \rightarrow 3 \times 6 = \underline{\underline{18}}$$

[2]

5. Calculate $\frac{4}{9}$ of 72.

$$\frac{1}{9} \text{ of } 72 = 9 \overline{)72}$$

$$\frac{4}{9} \rightarrow 4 \times 8 = \underline{\underline{32}}$$

[2]

6. Calculate $\frac{3}{8}$ of 56.

$$\frac{1}{8} \text{ of } 56 = 8 \overline{) 56}^7$$

$$\frac{3}{8} \rightarrow 3 \times 7 = \underline{\underline{21}}$$

[2]

7. Calculate $\frac{2}{5}$ of 45.

$$\frac{1}{5} \text{ of } 45 = 5 \overline{) 45}^9$$

$$\frac{2}{5} \rightarrow 2 \times 9 = \underline{\underline{18}}$$

[2]

8. Calculate $\frac{2}{7}$ of 28.

$$\frac{1}{7} \text{ of } 28 = 7 \overline{) 28}^4$$

$$\frac{2}{7} \rightarrow 2 \times 4 = \underline{\underline{8}}$$

[2]

9. Find $\frac{4}{7}$ of 91.

$$\frac{1}{7} \text{ of } 91 = 7 \overline{) 91}^{13}$$

$$\frac{4}{7} \rightarrow 4 \times 13 = \underline{\underline{52}}$$

[2]

10. Find $\frac{5}{6}$ of 84.

$$\frac{1}{6} \text{ of } 84 = 6 \overline{) 84}^{14}$$

$$\frac{5}{6} \rightarrow 5 \times 14 = \underline{\underline{70}}$$

[2]

11. Calculate $\frac{4}{9}$ of 45. $\frac{1}{9}$ of 45 = $9 \overline{)45}^5$
 $\frac{4}{9} \rightarrow 4 \times 5 = \underline{\underline{20}}$

[2]

12. Claire earns £500 each week.
 She uses $\frac{1}{5}$ of the £500 to pay her rent each week.
 She saves 25% of the £500 each week.

Tim says that Claire spends more on rent than she saves.

Explain why Tim is wrong.

$\frac{1}{5}$ of 500 = $5 \overline{)500}^{100}$ £100 on rent

25% = $\frac{25}{100} = \frac{1}{4}$, $\frac{1}{4}$ of 500 = $4 \overline{)500}^{125}$

£125 saved

Claire saves more than she spends, so Tim is wrong.

[2]

13. John buys a new computer for £300.
 Each month, he pays $\frac{1}{6}$ of this amount for the computer.

How much does John pay each month? $\frac{1}{6}$ of 300 = $6 \overline{)300}^{50} = \underline{\underline{£50}}$

[1]

14. If you know what 0.25 of a number is, explain how you can find the value of the number.

$0.25 = \frac{1}{4}$

To find a quarter of a number you just divide the number by 4, so if you know 0.25 of the number, you need to multiply by 4 to find the original number. [1]