

QT Quick Test 3 - to grade 4

1. Work out $2\frac{1}{2} \times 3\frac{1}{4}$

$$\frac{5}{2} \times \frac{13}{4} = \frac{65}{8} = \underline{\underline{8\frac{1}{8}}}$$

2. Aqdas drives 350km at an average speed of 75km/h. What is the time taken for Aqdas's journey? Give your answer in hours and minutes.

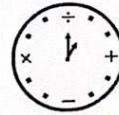
$$\begin{aligned} \text{Time} &= \frac{\text{Dist}}{\text{Speed}} = \frac{350}{75} = 4\frac{10}{15} = 4\frac{2}{3} \\ &= 4 \text{ hours } \underline{\underline{40 \text{ mins}}} \end{aligned}$$
$$\begin{array}{r} 75 \\ \times 4 \\ \hline 300 \end{array}$$

3. Leo bought 4kg of oranges from the supermarket for £2.40. What is the cost of 5kg of oranges?

$$\begin{array}{r} 60 \\ 4 \overline{) 240} \\ \underline{240} \\ 0 \end{array} \quad \begin{array}{r} 60 \\ \times 5 \\ \hline 300 \end{array} = \underline{\underline{£3}}$$

4. Calculate 79% of £320

$$0.79 \quad \begin{array}{r} 320 \\ \times 79 \\ \hline 2880 \\ 22400 \\ \hline 25280 \end{array} \quad \underline{\underline{252.8}}$$



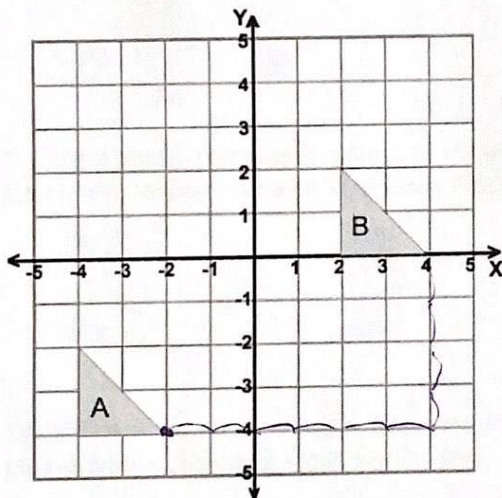
5. A model of a small block of flats has a vertical height of 15cm. The scale of the model is 1:150. Work out the height of the real block of flats. Give your answer in metres.

15cm

$$\begin{array}{r} 150 \\ 15 \\ \hline 150 \\ 1500 \\ \hline 2250 \end{array}$$

22.5m

6. Describe fully the single transformation that maps triangle A to triangle B.



Translation vector

$$\begin{pmatrix} 6 \\ 0 \end{pmatrix}$$

7. Write the ratio 7.5 : 2.5 in the form n : 1

$$\begin{array}{l} 7.5 : 2.5 \\ 75 : 25 \\ 3 : 1 \end{array}$$

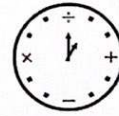
3 : 1

8. A circle has a radius of 17cm. Work out the area of the circle. Give your answer correct to 1 decimal place.

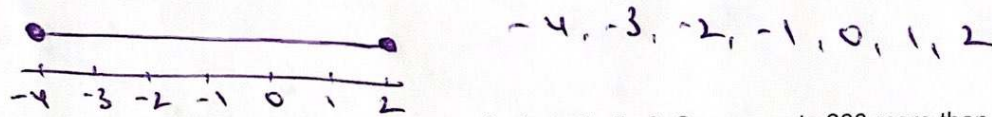


$$\begin{aligned} \text{Area} &= \pi r^2 \\ &= \pi (17)^2 \\ &= 289\pi \end{aligned}$$

$$\begin{array}{l} 907.9202 \\ \hline 907.9 \text{ cm}^2 \end{array}$$



9. n is an integer such that $-4 \leq n \leq 2$. Write down all the possible values of n .



10. Sameer and Harine share some money in the ratio 5 : 3. Sameer gets £60 more than Harine. Work out how much money Harine gets.

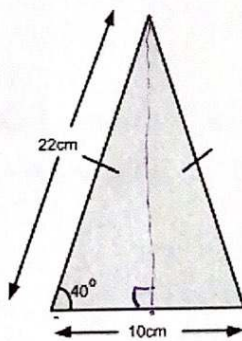
$$\begin{array}{r} 5 : 4 \\ 5 : 3 \\ \hline 2 \\ 120 \div 6 = 20 \\ \hline 120 \end{array}$$

Sameer £120
Harine £ 90

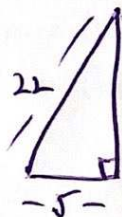
11. There are 65 counters in a bag. 11 of the counters are yellow, and the rest are green. One of the counters is taken at random. Find the probability that this counter is green.

$$\frac{54}{65}$$

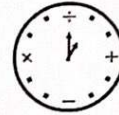
12. ABC is an isosceles triangle. Calculate the perpendicular height of triangle ABC. Give your answer correct to 3 significant figures.



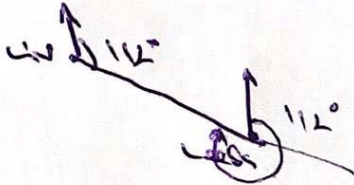
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Pythagoras



$$\begin{aligned} a^2 &= b^2 + c^2 \\ 22^2 &= 5^2 + c^2 \\ 22^2 - 5^2 &= c^2 \\ 459 &= c^2 \\ 21.42425 &= c \\ \underline{\underline{21.4 \text{ cm}}} \end{aligned}$$



13. The bearing of Leeds from Liverpool is 112° . Find the bearing of Liverpool from Leeds.



Liv from Leeds

$$\begin{array}{r} 112 \\ 180 \\ \hline 292 \end{array}$$

14. The frequency table shows the time taken for students to complete their maths homework.

- (a) Work out an estimate for the mean time for the students to complete their homework.
(b) Explain why your answer to part (a) is an estimate

Time taken (minutes)	Frequency	$f \times m$
$0 < h \leq 20$	6	$6 \times 10 = 60$
$20 < h \leq 30$	9	$9 \times 25 = 225$
$30 < h \leq 40$	12	$12 \times 35 = 420$
$40 < h \leq 60$	3	$3 \times 50 = 150$

(a) $\text{mean} = \frac{\text{Total}}{\text{Number}}$

$$= \frac{855}{30} = \underline{\underline{28.5 \text{ mins.}}}$$

(b) We don't know exact time, all the data is grouped, we've used midpoint of each class width.