



QT Quick Test 3 - Foundation Calculator

1. Jonas invests £6400 at a compound interest rate of 6% per annum. Work out the value of the investment at the end of 3 years. Give your answer to the nearest pence.

$$\begin{aligned} \text{Total} &= \text{orig} \times \text{mult}^n \\ &= 6400 \times 1.06^3 \\ &= \underline{\underline{£7642.50}} \end{aligned}$$

$$\begin{array}{l} 106\% \\ \swarrow \quad \searrow \\ 100\% \quad 6\% \\ \text{Total} \quad \text{Int.} \end{array}$$

2. Annabella bought a new car. The car depreciates by 15% each year. After one year the car is worth £21,165. Work out the price of the car when new.

$$\begin{aligned} \text{Total} &= 85\% \text{ of the new} \\ 21165 &= 0.85N \\ \frac{21165}{0.85} &= N \end{aligned}$$

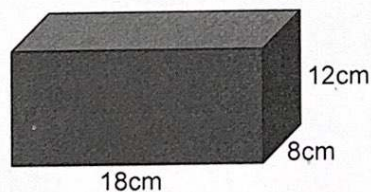
$$\underline{\underline{£24900}}$$

3. Kairav travelled 60km in 1 hour and 35 minutes. Vicky travelled 80km in 2 hours and 10 minutes. Who has the **lower** average speed? You must show your working.

$$\text{Kairav} = \text{Speed} = \frac{\text{Dist}}{\text{Time}} = \frac{60}{1\frac{35}{60}} = 37.89 \text{ km/h}$$

$$\text{Vicky} = \text{Speed} = \frac{D}{T} = \frac{80}{2\frac{10}{60}} = \underline{\underline{36.9 \text{ km/h}}}$$

4. A solid cuboid is made of plastic. The plastic has a density of 0.95g per cm³. Work out the mass of the cuboid.



$$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$$

$$D \times V = \text{Mass}$$

$$0.95 (12 \times 18 \times 8) = \text{Mass}$$

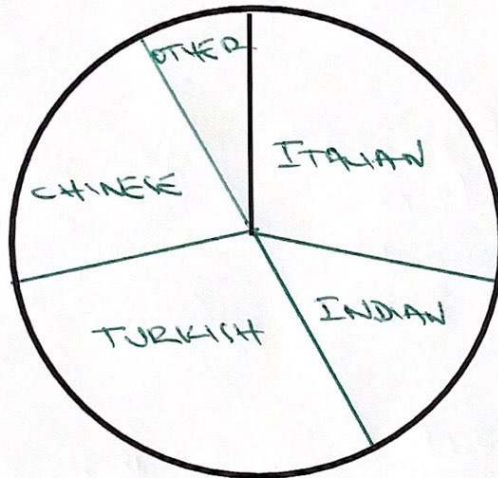
$$\underline{\underline{1641.6 \text{ g}}} = \text{Mass}$$



5. Amy carries out a survey of 60 people. She asks them their favourite takeaway. The table shows this information. Draw a pie chart to represent this data.

Favourite Takeaway	Frequency
Italian	17
Indian	9
Turkish	18
Chinese	12
Other	4

$$\frac{360}{60} = 6^\circ$$
$$\begin{array}{r} 102 \\ 54 \\ 108 \\ 72 \\ 24 \\ \hline 360 \end{array}$$



6. Use a ruler and compasses to construct a 60° angle at A. you must show all your construction lines.

