

## Foundation Paper 1 2007

Created by

Graduate Bsc (Hons) MathsSci (Open) GIMA

- 1a. Given  $1375 + 462$

$$\begin{array}{r} 1375 \\ + 462 \\ \hline 1837 \\ \hline 1 \end{array}$$

- b. Given  $5.23 \times 4$

$$\begin{array}{r} 5.23 \\ \times 4 \\ \hline \pounds 20.92 \\ \hline 1 \end{array}$$

- c.  $\frac{1}{8}$  of 120 metres

$$8 \overline{)120} \begin{array}{l} 15 \\ \hline \end{array} = 15 \text{ metres}$$

2. Given the bicycle is reduced by 20% and the original price was £150  
The amount of money taken off will be:

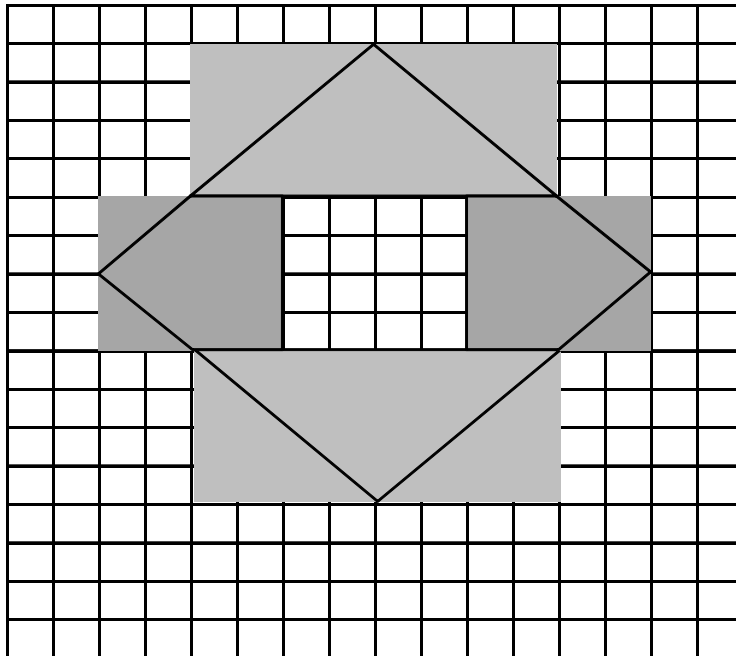
Step 1:  $10\% \text{ of } \pounds 150 = 150 \div 10 = \pounds 15$

Step 2:  $20\% \text{ is } \pounds 15 \times 2 = \pounds 30$

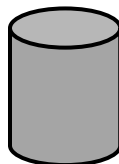
## Foundation Paper 1 2007

Created by  
Graduate Bsc (Hons) MathsSci (Open) GIMA

3. Enlarging the original shape by a factor of 2  
( making everything twice as long ) we get:



4. (a) Given the pattern of mathematical shapes. The next shape will be:



- b) The mathematical shape is called a *Cylinder*.

## Foundation Paper 1 2007

Created by

Graduate Bsc (Hons) MathsSci (Open) GIMA

---

5. Given Sheila travels 20 km on 1 litre of fuel.  
Then for 140 km she will need:

$$140 \div 20 = 140 \div 10 \div 2 = 14 \div 2 = 7$$

She will need 7 litres.

6. Given Pauline's DVD lasts 135 minutes and she starts watching at 7.50pm.  
Also she wants to watch Football highlights at 10.15 pm. The time she has  
to wait before the football starts after watching the DVD will be:

$$135 \text{ minutes} = 2 \text{ hrs } 15 \text{ mins}$$

$$\text{Time the DVD ends is } 7.50\text{pm} + 2 \text{ hrs } 15 \text{ mins} = 10.05\text{pm}$$

Time before Football starts and DVD ends will be:

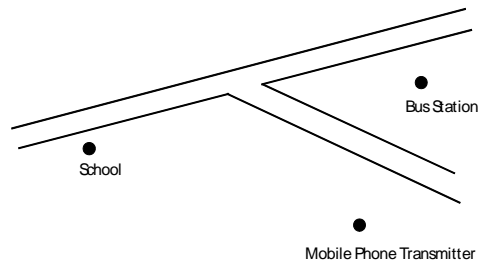
$$10.15\text{pm} - 10.05\text{pm} = 10 \text{ mins wait.}$$

Foundation Paper 1 2007

Created by  
Graduate Bsc (Hons) MathsSci (Open) GIMA

7. Given the map of the school, Bus station and Mobile Phone Transmitter.

- (a) Measuring the distance between the school and Bus Station we get: 8.4 cm



- (b) Given the scale is 1cm represents 100m

The actual distance between the school and Bus Station is:

$$8.4 \times 100 = 840\text{m}$$

- (c) Given the new safety regulations that transmitters must be more than 1 km from the school.

Distance from School to Phone Transmitter on map = 7.5cm

Real life distance is  $7.5 \times 100 = 750\text{m}$

The transmitter is NOT a safe distance from the school since 750m is less than 1km ( 1000m)

8. Given the information on the radar screen we simply read off the bearing of B.

$$B = 210^\circ$$

