

### 1 Map scales

A map has a scale of 1 : 40 000.

- Two lakes are 7.5 cm apart on the map. How far apart are they in real life? Give your answer in km.
- A cycle path is 5.2 km long. How long is it on the map?

$$a) 7.5 \times 40\,000 = 300\,000 \text{ cm} = 3 \text{ km}$$

$$b) 520\,000 \div 40\,000 = 13 \text{ cm}$$

### 2 Map scales: measuring

- Measure from the farm to the mill on this map. Work out the real distance in km.
- Which is nearer the farm, the mill or the church? By how many metres?

Scale 1 : 40 000

● Church

Farm ●

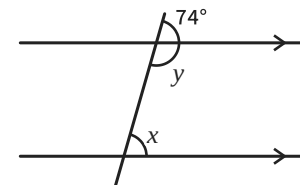
● Mill

$$a) 5 \text{ cm} \times 40\,000 = 200\,000 \text{ cm} = 2 \text{ km}$$

$$b) \text{ church: } 3.5 \text{ cm} = 1.4 \text{ km, nearer by } 600 \text{ m}$$

### 3 Angles on parallel lines

- Work out angle  $x$ . Give a reason.
- Work out angle  $y$ . Give a reason.



Not drawn accurately

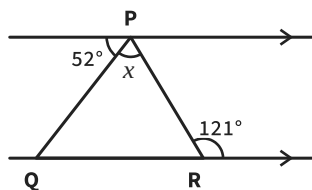
$$a) x = 74^\circ, \text{ corresponding angles are equal}$$

$$b) y = 180 - 74 = 106^\circ, \text{ co-interior angles}$$

### 4 Angles on parallel lines

The two horizontal lines are parallel.

- Work out angle PQR. Give a reason.
- Work out angle  $x$ .



Not drawn accurately

$$a) 52^\circ, \text{ alternate angles are equal}$$

$$b) \text{ angle } PRQ = 180 - 121 = 59^\circ$$

$$x = 180 - 52 - 59 = 69^\circ$$

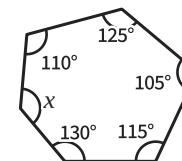
## Angles 2

### revision mat answers

Foundation A

### 5 Angles in regular polygons

- Work out the sum of the interior angles of an octagon.
- Work out angle  $x$  in this hexagon.



Not drawn accurately

$$a) (8 - 2) \times 180 = 1080^\circ$$

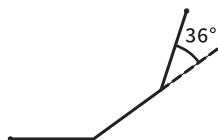
$$b) (6 - 2) \times 180 = 720^\circ$$

$$720 - 585 = 135^\circ$$

### 6 Angles in regular polygons

Part of a regular polygon is drawn. Each exterior angle is  $36^\circ$ .

- How many sides does the polygon have?
- Work out the size of each interior angle.

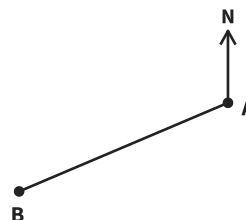


$$a) 360 \div 36 = 10 \text{ sides}$$

$$b) 180 - 36 = 144^\circ$$

### 7 Bearings

- Measure the bearing of B from A.
- Work out the bearing of A from B.



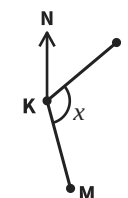
$$a) 247^\circ$$

$$b) 247 - 180 = 67^\circ$$

### 8 Bearings

The bearing of L from K is  $050^\circ$ . The bearing of M from K is  $165^\circ$ .

- Work out angle  $x$ .
- Work out the bearing of K from M.



Not drawn accurately

$$a) 165 - 50 = 115^\circ$$

$$b) 165 + 180 = 345^\circ$$