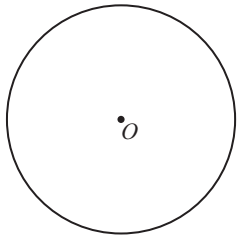
2



The diagram shows a circle, centre O.
On the diagram

(a) draw a diameter [1]

(b) mark a point on the circumference and label it C. [1]

13 The scale drawing shows the positions of town A and town B.
The scale is 1 centimetre represents 10 kilometres.

Scale: 1 cm to 10 km

(a) Work out the actual distance from town A to town B.

..... km [2]

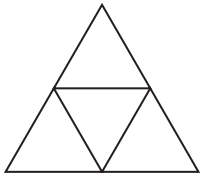
(b) Measure the bearing of town B from town A.

..... [1]

(c) Town C is 45 km from town A on a bearing of 310°.

On the scale drawing, mark the position of town C. [2]

5 The diagram is made from equilateral triangles.

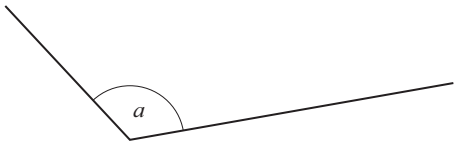


(a) On the diagram, draw all the lines of symmetry. [2]

(b) Write down the order of rotational symmetry.

..... [1]

3



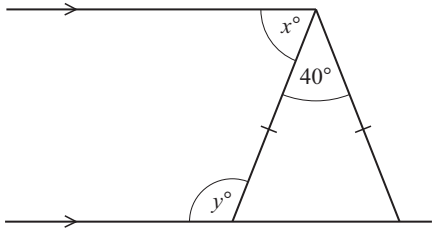
(a) Measure angle a.

..... [1]

(b) Write down the mathematical name of this type of angle.

..... [1]

10



NOT TO SCALE

The diagram shows an isosceles triangle between a pair of parallel lines.

(a) Find the value of x.

$x =$ ..... [2]

(b) Find the value of y.
Give a geometrical reason for your answer.

$y =$ ..... because .....

..... [2]

11 **(a)** Sam buys 3 apples at 40 cents each.
He also buys 5 peaches.
The total cost is \$3.45 .

Find the cost of 1 peach.

..... cents [3]

(b) Pears cost 55 cents each.
Bananas cost 36 cents each.

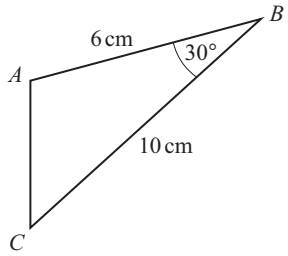
Write an expression, in cents, for the cost of x pears and y bananas.

..... [2]

2 Find **all** the common factors of 8 and 12.

..... [1]

23

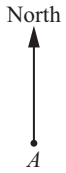


NOT TO SCALE

Work out the area of triangle *ABC*.

..... cm^2 [3]

15 The scale drawing shows the position of ship *A*.
The scale is 1 centimetre represents 40 kilometres.



Scale : 1 cm to 40 km

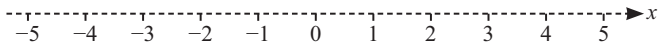
Ship *B* is 220 km from ship *A* on a bearing of 140°.

On the scale drawing, mark the position of ship *B*. [2]

16 Find 57% of $128.

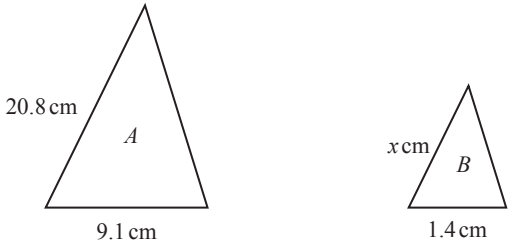
$ ..... [1]

17 Represent the inequality $x \geqslant 3$ on the number line.



[1]

29 **(a)**



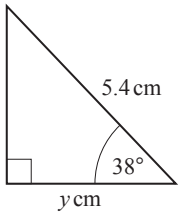
NOT TO SCALE

The diagram shows two similar triangles, *A* and *B*.

Calculate the value of *x*.

$x =$ ..... [2]

(b)

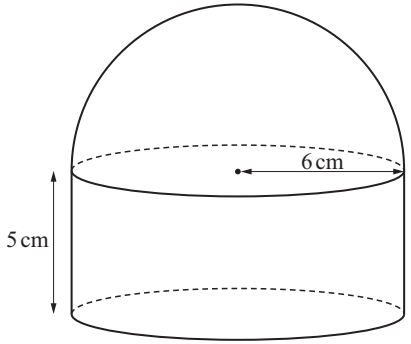


The diagram shows a right-angled triangle.

Calculate the value of *y*.

$y =$ ..... [2]

16



NOT TO SCALE

The diagram shows a solid made by joining a hemisphere to a cylinder.
The radius of both the hemisphere and the cylinder is 6 cm.
The height of the cylinder is 5 cm.

Find the **total** surface area of the solid.
Give your answer in terms of π.

..... cm^2 [4]

17 Find the value of

(a) $125^{\frac{2}{3}}$

..... [2]

(b) $4^{-\frac{5}{2}}$.

..... [2]