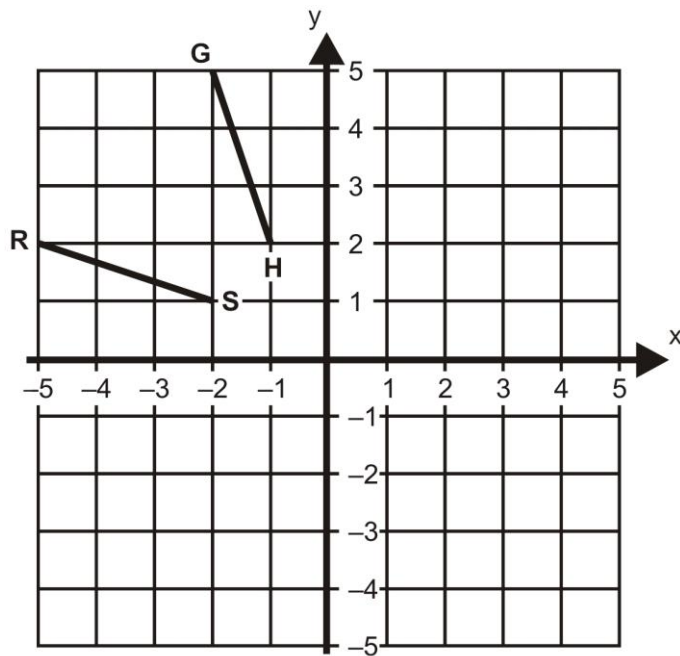


Q1.

The line **RS** is a reflection of the line **GH** in a mirror line.

Draw in the mirror line.



Complete this sentence:

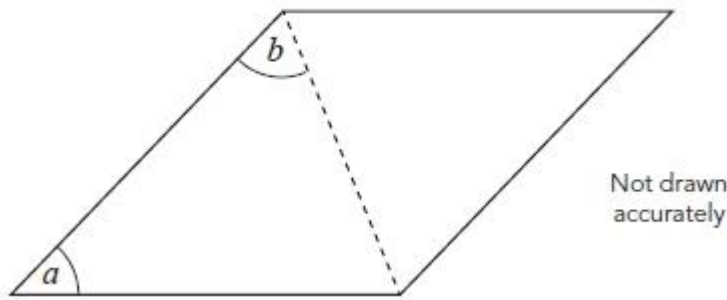
The mirror line is

$y =$

1 mark

Q2.

The dotted line is a diagonal of this **rhombus**.

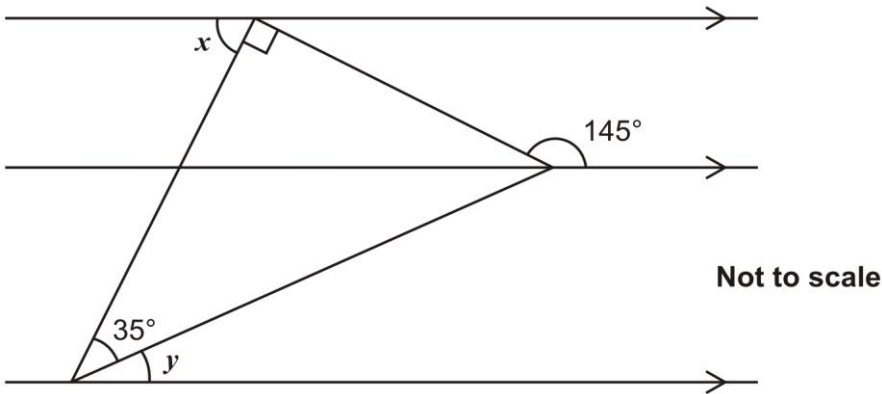


Show your method	If angle $a = 80^\circ$, what is angle b ?																			
	If angle $b = 80^\circ$, what is angle a ?																			

3 marks

Q3.

The diagram shows a right-angled triangle and three parallel lines.



Calculate the size of angle x and angle y

Do **not** use a protractor (angle measurer).

$x =$

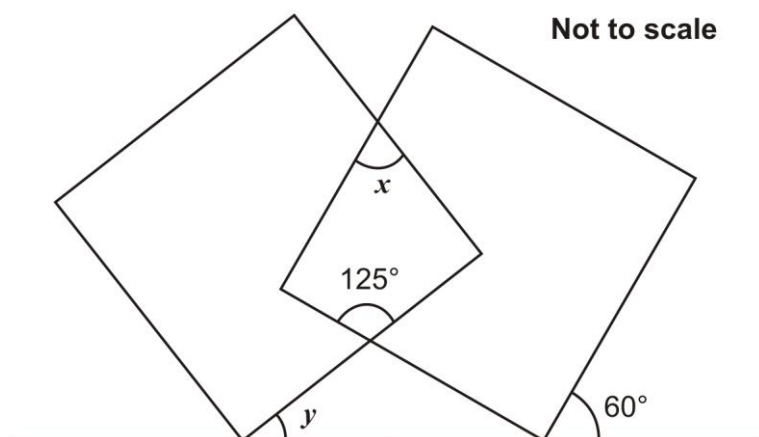
1 mark

$y =$

1 mark

Q4.

The diagram shows two overlapping squares and a straight line.



Calculate the value of **angle x** and the value of **angle y**.

Do **not** use a protractor (angle measurer).

$x =$

1 mark

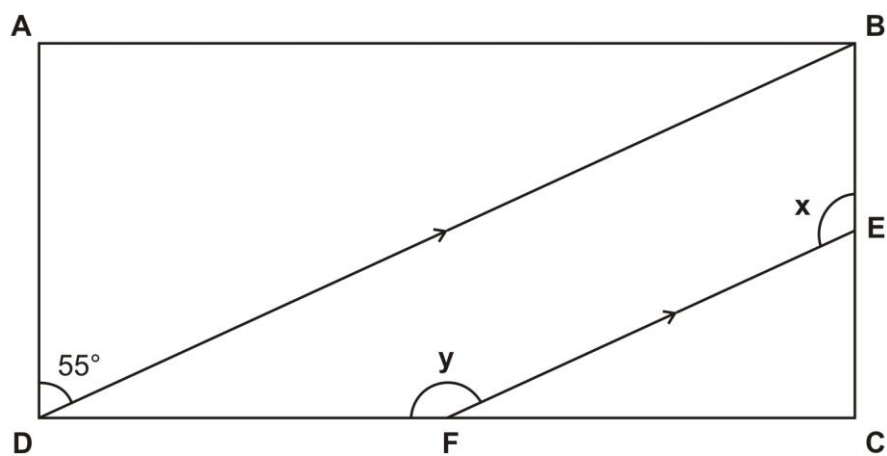
$y =$

1 mark

Q5.

The shape **ABCD** is a **rectangle**.

BD is **parallel** to **EF**.



Not to scale

Calculate the sizes of the angles **x** and **y**.

Do **not** use an angle measurer (protractor).

$x =$

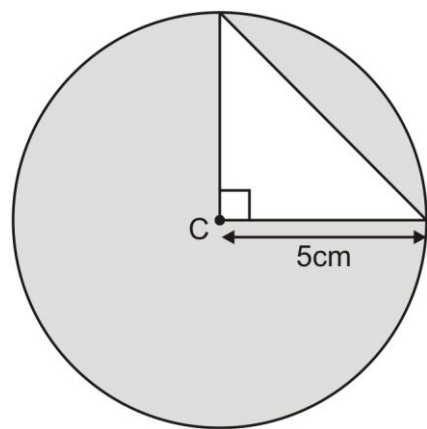
$y =$

2 mark

Q6.

The diagram shows a **right-angled triangle** inside a **circle**.

The circle has a radius of **5 centimetres**.



Calculate the **area** of the **triangle**.

cm²

1 mark

Calculate the area of the **shaded part** of the diagram.

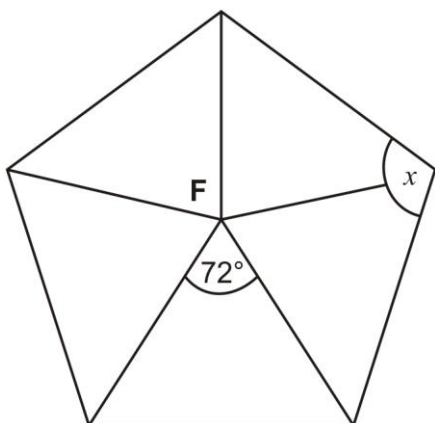
Show your method

cm²

2 mark

Q7.

F is the centre of a **regular** pentagon.



Work out the value of **angle** x without using an angle measurer.

You MUST explain how you worked out your answer.

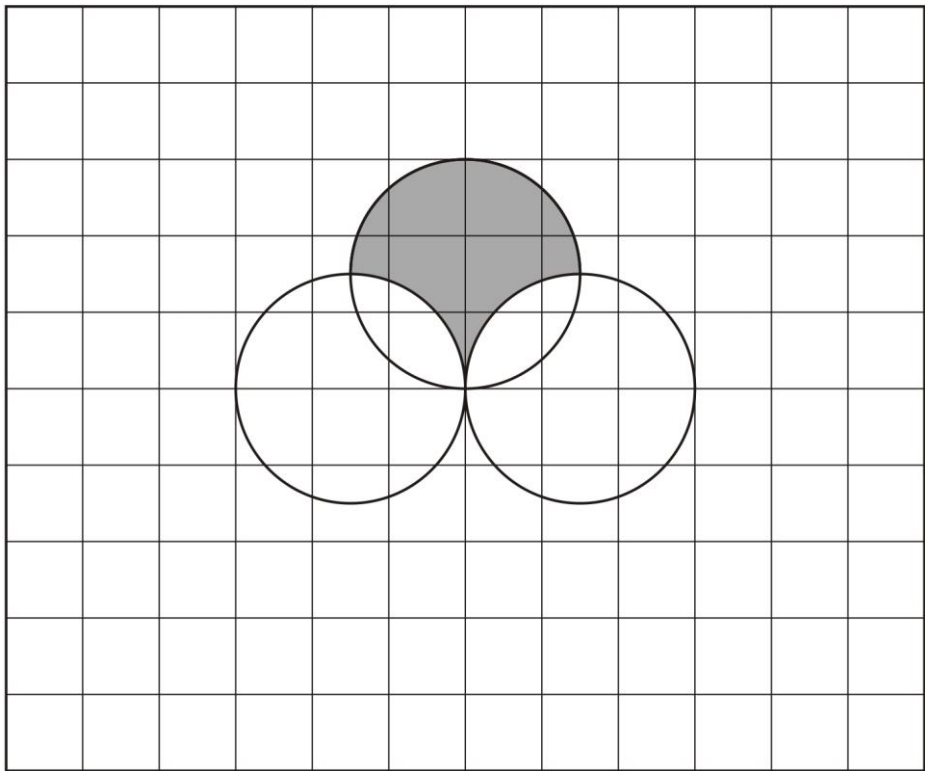
Show
your
method

$x =$

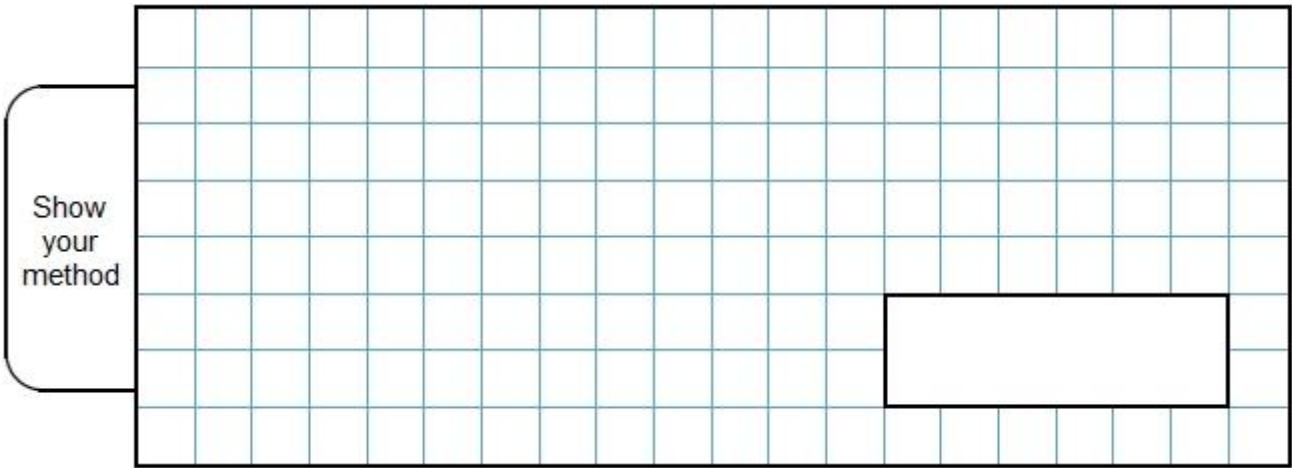
2 marks

Q8.

A design is made using three circles on a 1 centimetre grid.



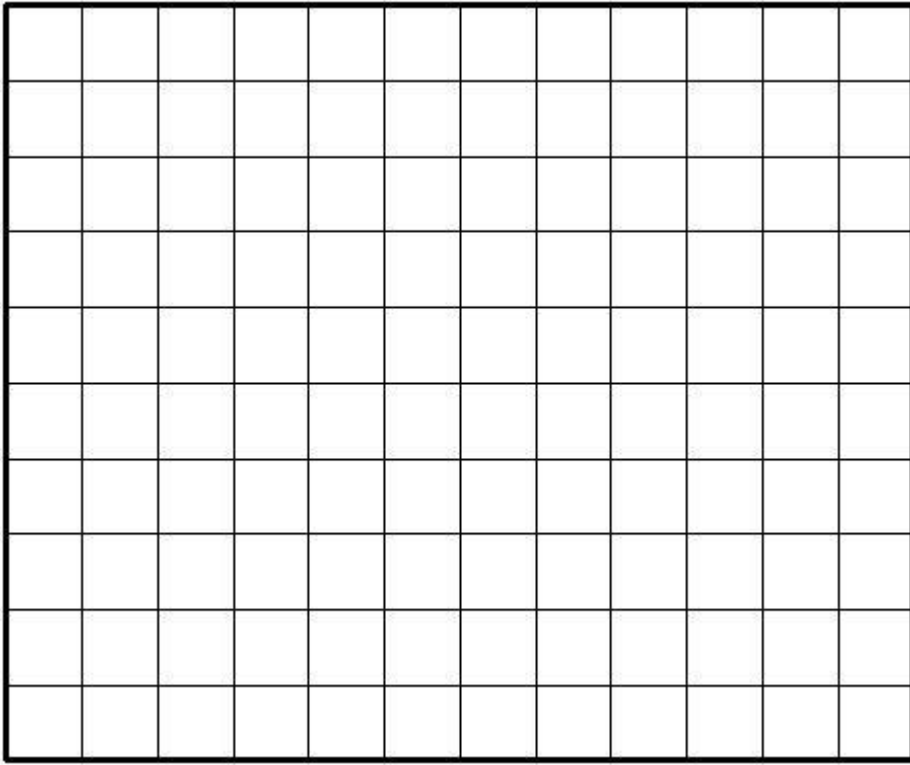
Find the **perimeter** of the shaded part of the design, correct to 1 decimal place.



2 marks

On this grid, draw the **shaded part** of the design **enlarged** by a scale factor of **2**.

You **MUST** use a pair of compasses.



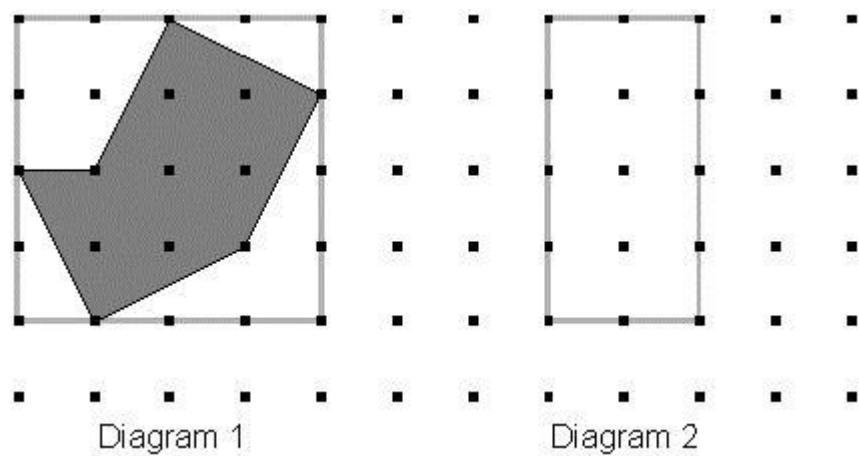
2 marks

Q9.

Diagram 1 is a design for a floor tile.

The design is transformed so that the **width** is multiplied by a scale factor of $\frac{1}{2}$.

Draw the **outline** of the transformed shape in Diagram 2

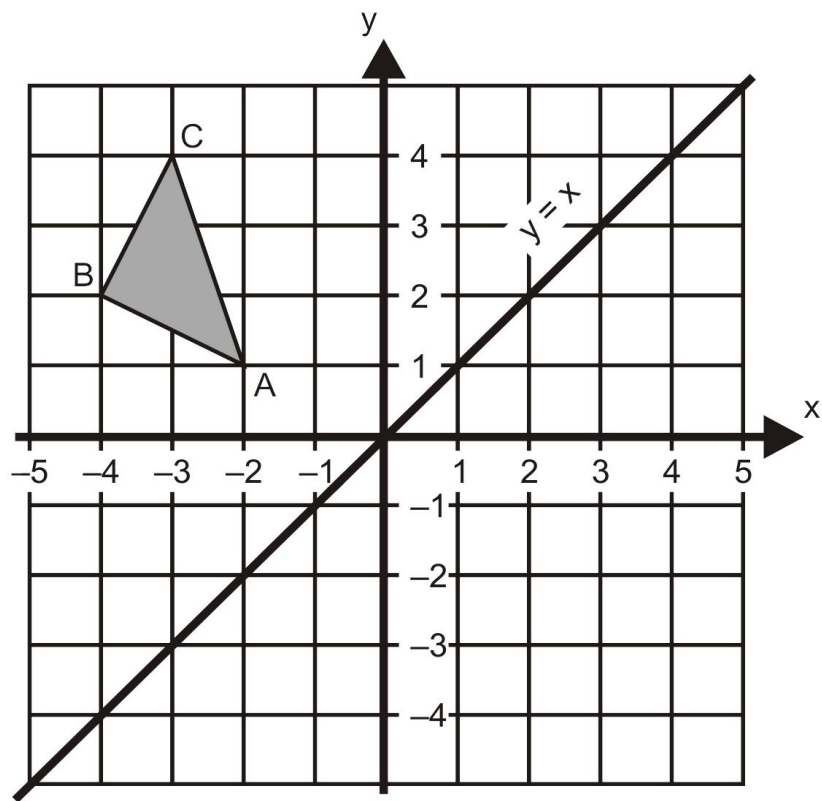


2 marks

Q10.

The diagram shows the triangle **ABC** and the line $y = x$.

Draw the triangle **PQR** which is the **reflection** of the triangle **ABC** in the line $y = x$.



2 marks

Mark schemes

Q1.

$$\boxed{y = -x}$$

Do not accept $\boxed{y = x-}$

There is no mark for drawing in the mirror line (this is an earlier level concept).

[1]

Q2.

$$b = 50$$

1

$$a = 20$$

1
U1

As evidence of a correct method, in either part, shows or implies that the angles in one of the triangles are a , b and b

eg, in the first question part

- 80, 50, 50 seen
- $(180 - 80) \div 2$
- $(360 - 160) \div 2 \div 2$

eg, in the second question part

- $180 - 2 \times 80$
- $(360 - 160 \times 2) \div 2$

eg, correct answers transposed

! Incomplete or no working shown

Provided at least one correct angle is credited, award this mark

! In the second question part 80, 80, 20 is insufficient without any indication of the position of the equal angles

1

[3]

Q3.

(a) $x = \boxed{55^\circ}$

1

(b) $y = \boxed{20^\circ}$

OR $y = (\text{Answer to (a)} - 35^\circ)$

*If answers to x and y are transposed but otherwise correct, award **ONE** mark only in the (b) box.*

1

[2]

Q4.

(a) 55°

If answers for 9a and 9b are transposed, but otherwise correct, award the mark for 9b only

1

(b) 25°

1

[2]

Q5.

Award **TWO** marks for the correct answers $x = 125$ **AND** $y = 145$.

If the answers are incorrect award **ONE** mark for either $x = 125$ **OR** $y = 145$ **OR** the sum of x and y being 270.

up to 2

[2]

Q6.

(a) 12.5 **OR** $12\frac{1}{2}$

1

(b) Award **TWO** marks for the correct answer in the range of 66 to 66.1 inclusive **OR** an answer based upon values obtained in **13a**.

If the answer is incorrect award **ONE** mark for evidence of an appropriate method, eg

- $(3.14 \times 5 \times 5) - 12.5$

The calculation need not be completed for the award of the mark.

Up to 2

[3]

Q7.

Award **ONE** mark for the correct answer of 108°

Award **ONE** mark for appropriate explanation, eg:

- $180 - 72$
- regular pentagon, angles are 108°
- isosceles triangles, 2×54

Up to 2

[2]

Q8.

- (a) Award **TWO** marks for the correct answer of 9.4 cm.

If answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg:

- $2 \times \pi \times 1.5$ OR $3 \times \pi$

Units may be omitted.

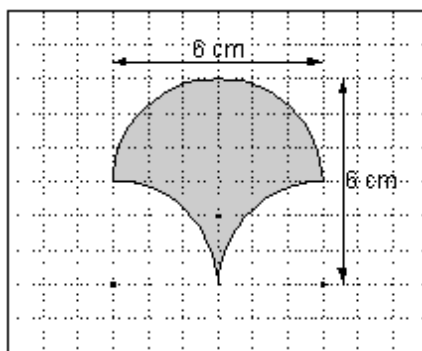
*Award **ONE** mark for unrounded answer, eg*

- **9.42**

Up to 2

- (b) Award **TWO** marks for drawing as below, anywhere on grid, to accuracy of $\pm 1\text{mm}$ at any point.

Centre of arcs may not be apparent.



If drawing is inaccurate but shows evidence of the correct location of the centres of ALL three arcs in relation to each other, award **ONE** mark.

Shading is unnecessary.

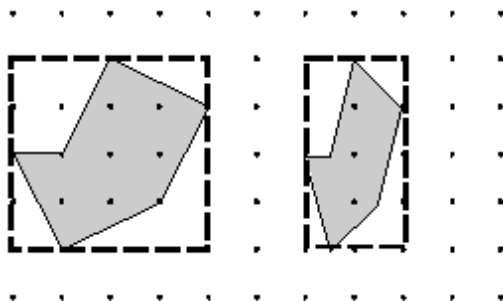
*Award **TWO** marks if 3 complete circles are accurately drawn and correctly located.*

Up to 2

[4]

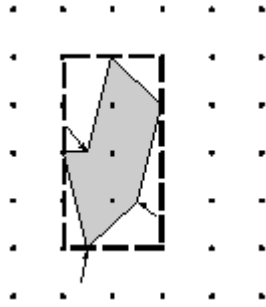
Q9.

Award **TWO** marks for all the 6 corner points in the correct places.



Award **ONE** mark if only 5 corner points are in the correct places.

No marks awarded for **4 or fewer** correct corners. The corners marked by arrows need not be exactly half way between the two horizontally adjacent dots, but must **not** be on these dots:

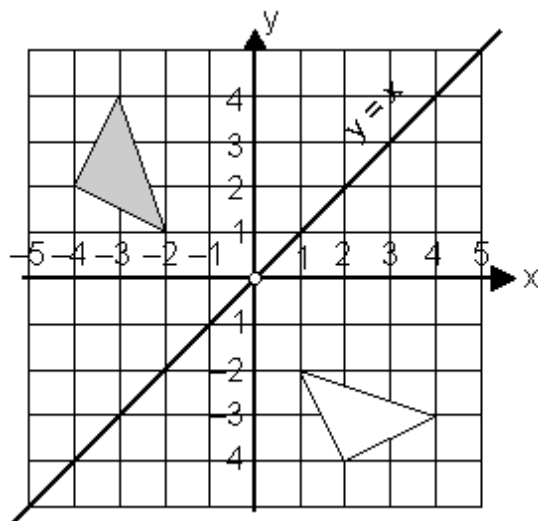


Up to 2

[2]

Q10.

Award **TWO** marks if **all 3** vertices are in the correct positions.



Award **ONE** mark if **only 2** vertices are in the correct positions.

*No mark is awarded if **2 or more** vertices are **incorrectly** positioned.*

Up to 2

[2]