Topic Test 1 (20 minutes)
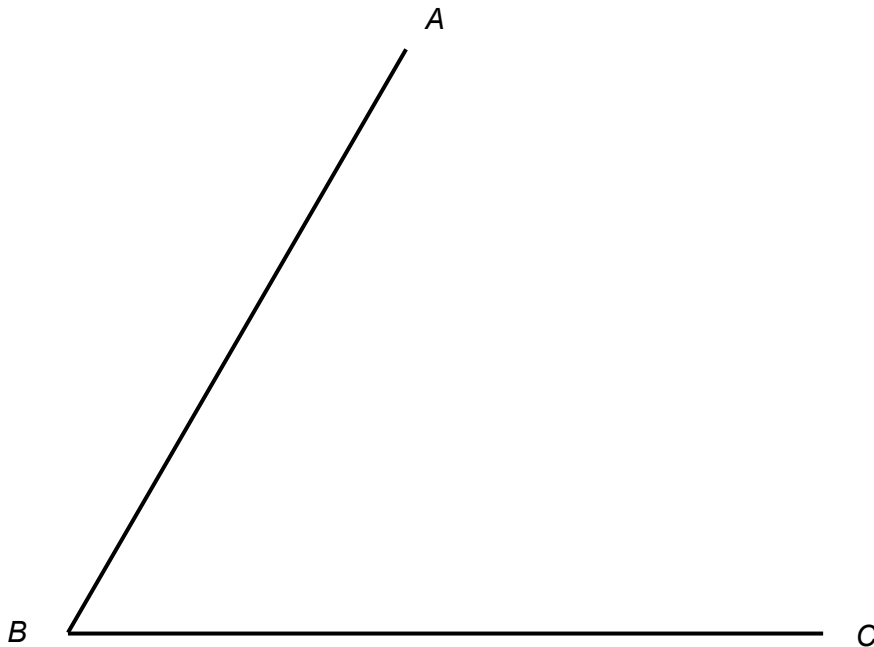## Constructions and loci - Higher

You will need compasses, protractor and a ruler to answer these questions.

1   Construct the angle bisector of *ABC*.

[2 marks]

A

B

C

2 A simple computer drawing program uses three commands

        FORWARD
        TURN LEFT
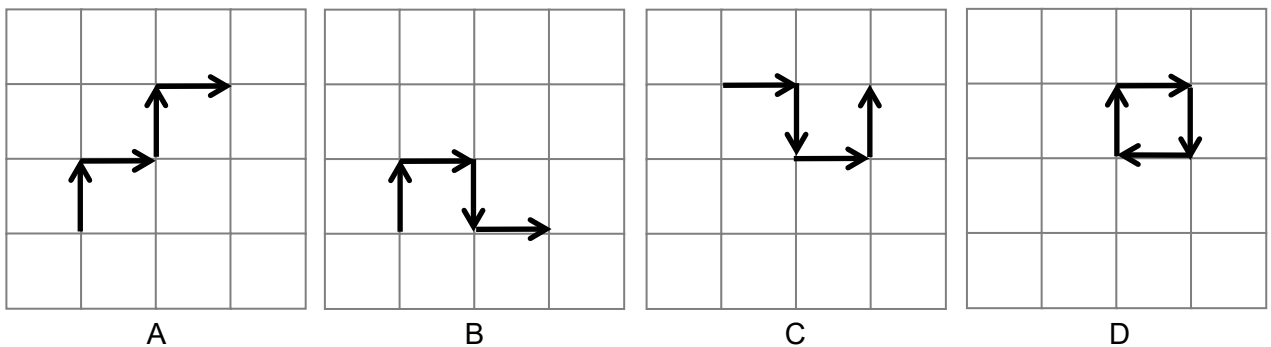   TURN RIGHT

2 (a) Maisy writes the following to draw a square.

        FORWARD 1 cm
        TURN RIGHT
        FORWARD 1 cm
        TURN LEFT
        FORWARD 1 cm
        TURN RIGHT
        FORWARD 1 cm

Which of the following is the path that the computer draws.
Circle the correct letter.

[1 mark]

A   B   C   D

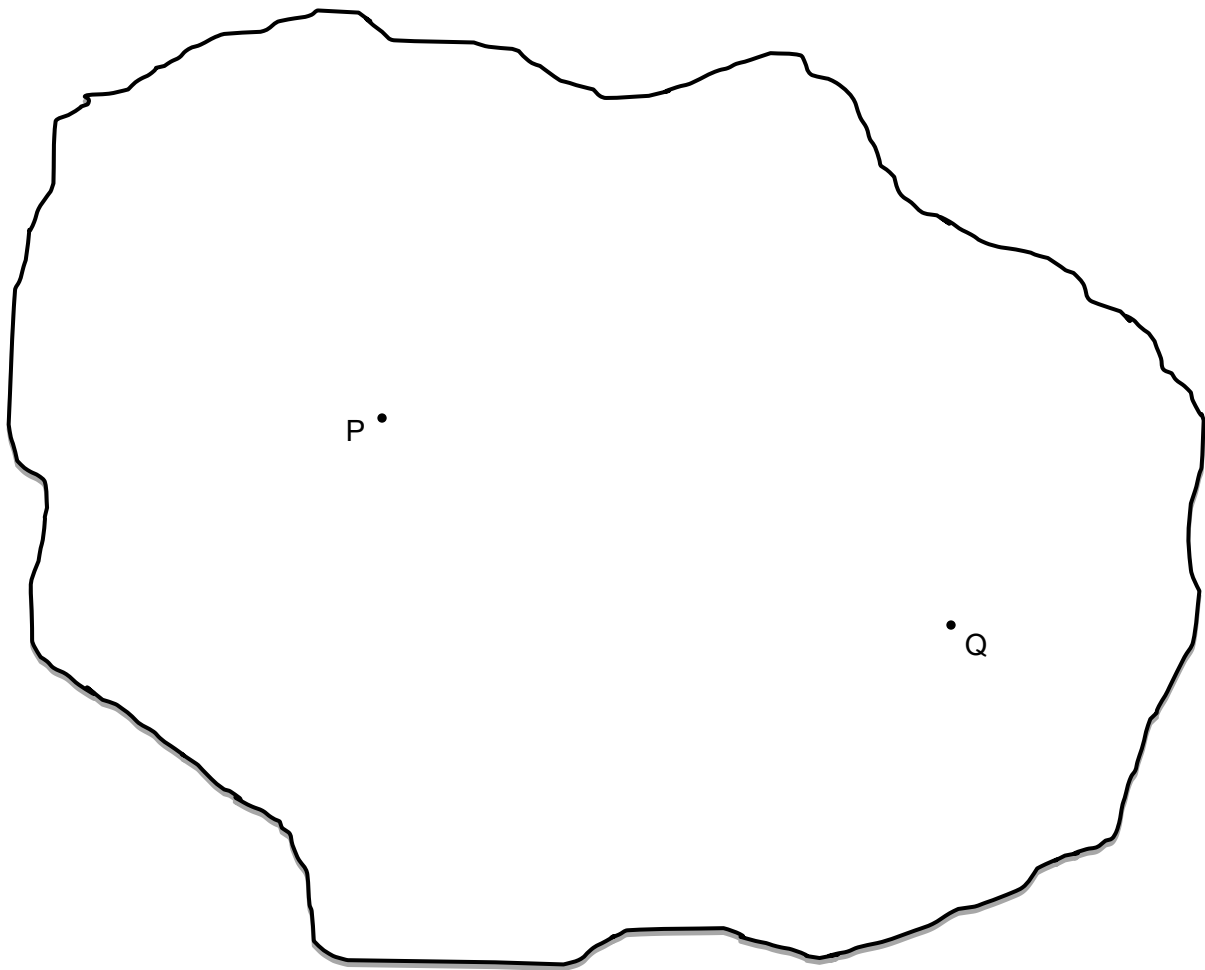**2 (b)** Complete this program to draw a rectangle 4 cm by 6 cm

[2 marks]

        FORWARD   6 cm

        TURN   RIGHT

        FORWARD   ……….. cm

        TURN …………

        FORWARD   ……….. cm

        TURN ………….

        FORWARD   ………… cm

3   Two mobile phone masts are on an island at P and Q.
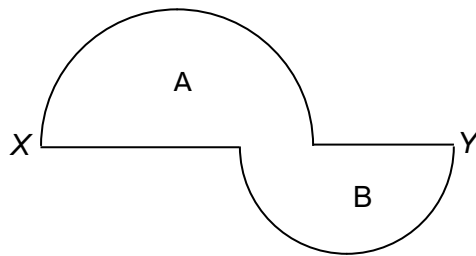Both masts have a range of 60 kilometres.

Shade on the map, the areas of the island where mobile phones do not get a signal.

[2 marks]

Scale: 1 cm represents 10 km

P •

• Q

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4 The sketch shows a shape made from 2 semicircles A and B.

A has radius 4 cm

B has radius 3 cm

XY is a straight line.

$XY = 11\dfrac{1}{2}$ cm

Not drawn
accurately

Construct an accurate drawing of the shape.
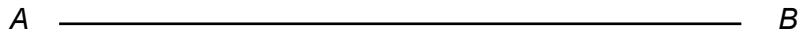
[2 marks]

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5 Using a ruler and compasses only, construct triangle *ABC* such that

AB = 10 cm
Angle *CAB* = 60°
Angle *ABC* = 30°

The base *AB* has been drawn for you.

[3 marks]

A ——————————————————————— *B*

6 A region is shaded within the square *LMNQ*.
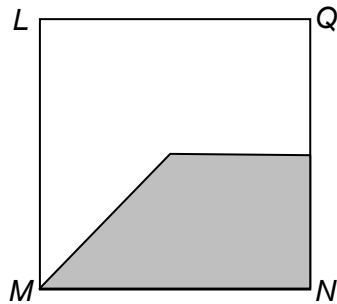
P is any point within the shaded region.

Which of the following describe *P*?
Circle the correct description.

[1 mark]

$PN \leq PL$ **and** $PQ \geq PN$ $\qquad\qquad$ $PN \geq PL$ **and** $PQ \geq PN$

$PN \leq PL$ **and** $PQ \leq PN$ $\qquad\qquad$ $PN \geq PL$ **and** $PQ \leq PN$

7 Construct the perpendicular from the point *P* to the line L.

[2 marks]

P
$\times$

———————————————————————— L

8 This puzzle was in a children's magazine.
Solve the puzzle.

[3 marks]

Can ye find ye Treasure?
Equal distance from ye bone-yard and ye cabin.
50 paces from ye Palm Tree

Map of Dead Man's island.

├──────┤ = 10 paces

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9 Construct an angle of 45° at *A*.

[2 marks]

A _____