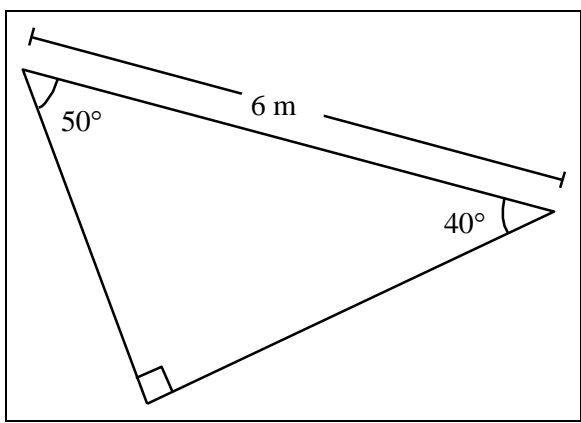


1

Mara has been given the job of decorating her company's staff room. She wants to draw a triangle on one of the walls and paint it blue. A sketch of the wall with the measures of the triangle is shown below. Mara must find the area of the blue triangle before buying the paint. Each litre of paint covers 2 square metres. The paint she wants is sold only in 1-litre containers.

**How many litres of paint will Mara have to buy?**



2

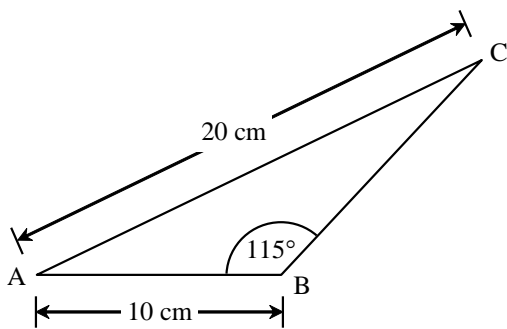
In triangle ABC on the right:

$$m \overline{AC} = 20 \text{ cm}$$

$$m \overline{AB} = 10 \text{ cm}$$

$$m \angle ABC = 115^\circ$$

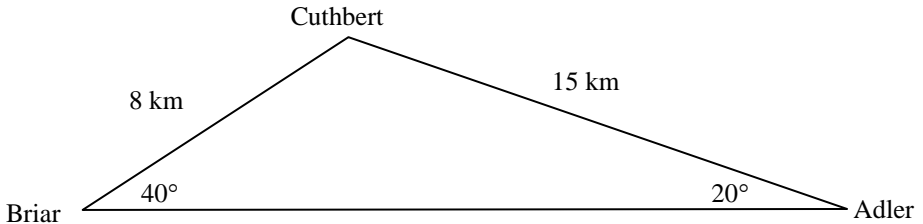
**What is the area of triangle ABC?**



3

A plane crashed in the vicinity of the three towns of Adler, Briar and Cuthbert. The Search and Rescue Department has the information given in the triangle below.

**What is the area of the triangle formed by the three towns?**



4

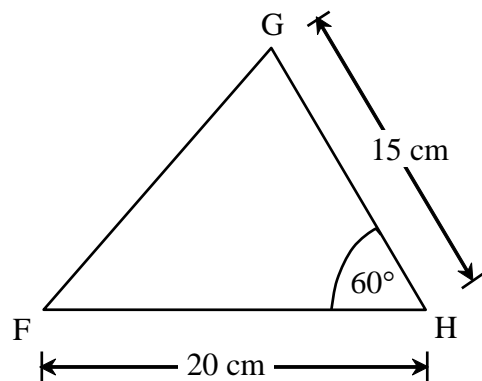
In a triangle FGH shown on the right:

$$m \overline{FH} = 20 \text{ cm}$$

$$m \overline{GH} = 15 \text{ cm}$$

$$m \angle FGH = 60^\circ$$

**What is the area of triangle FGH?**



5

In triangle RST shown on the right:

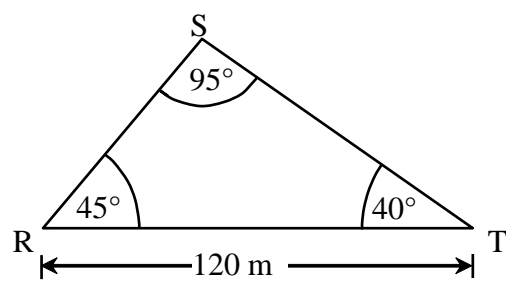
$$m \overline{RT} = 120 \text{ m}$$

$$m \angle TRS = 45^\circ$$

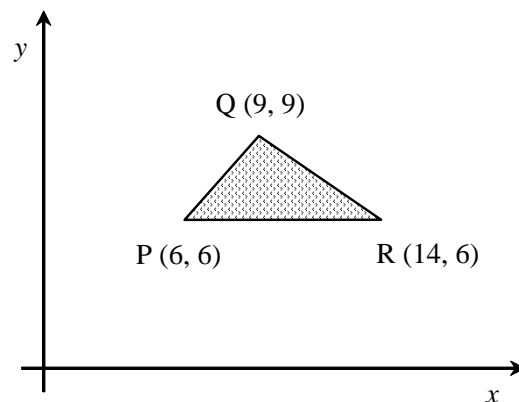
$$m \angle RST = 95^\circ$$

$$m \angle STR = 40^\circ$$

**What is the area of triangle RST?**



6 Determine the area of triangle PQR shown here on the Cartesian plane.



7 Line segment OQ divides triangle OPR shown below into two triangles: triangle OPQ and triangle OQR. In addition:

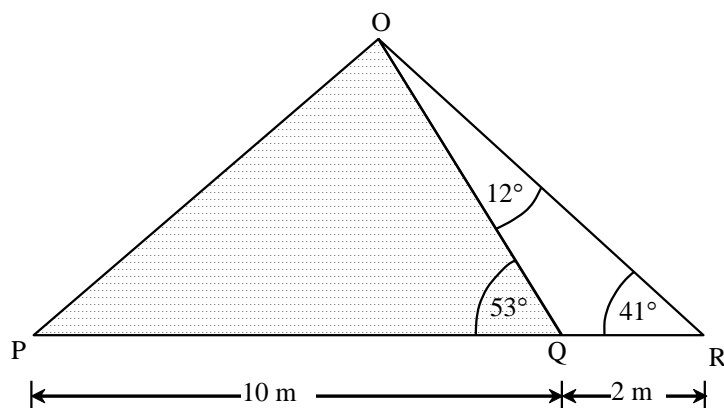
$$m\angle OQR = 53^\circ$$

$$m\angle ORP = 41^\circ$$

$$m\angle QOR = 12^\circ$$

$$m\overline{PQ} = 10 \text{ m}$$

$$m\overline{QR} = 2 \text{ m}$$



What is the area of triangle OPQ?

8 In the Cartesian plane below, lines PQ and RS intersect the y-axis at points P and R respectively. Lines PQ and RS intersect at point Q. The equation of line PQ is  $y = -x + 42$ .

What is the area of triangle PQR?

