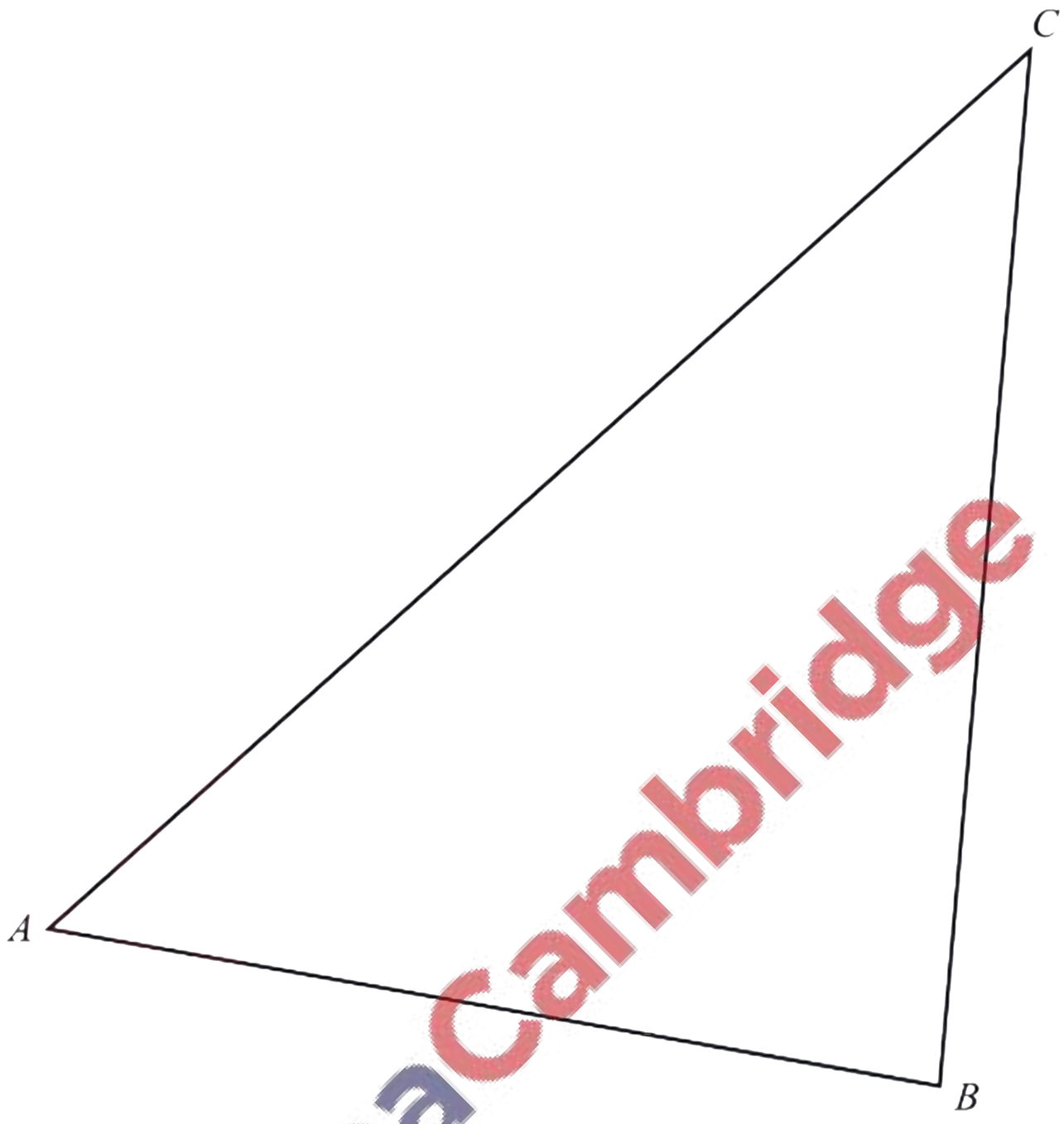
Unit 28: Geometrical Constructions

1. M/J 18/P12/Q19



(a) On the diagram, construct the perpendicular bisector of AB. [1]

(b) On the diagram, construct the locus of points inside triangle ABC, that are

(i) 7 cm from C, [1]

(ii) equidistant from AB and AC. [1]

(c) P is any point which is

equidistant from A and B
and more than 7 cm from C
and nearer to AC than AB.

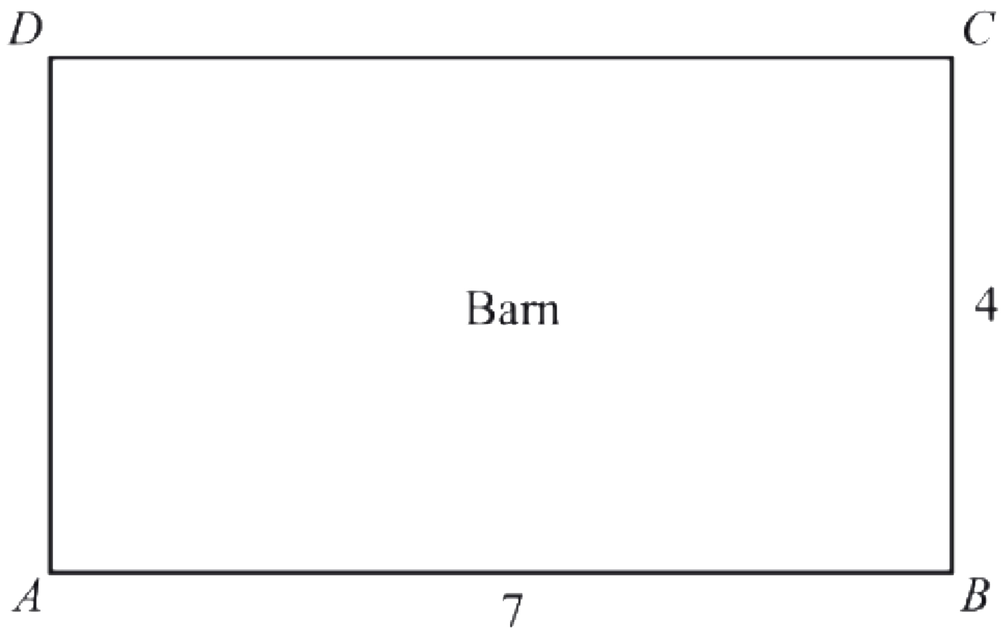
Find the extremes of the possible positions of P and label them P_1 and P_2. [1]

2. M/J 18/P11/Q10

The scale diagram below shows a barn $ABCD$.
$AB = 7$ m and $BC = 4$ m.
On the diagram 1 cm represents 1 m.

A horizontal rail is attached to the outside wall of the barn from A to B.
Jasper is a dog attached to a rope 3 m long.
The other end of the rope is attached to the rail and can slide along it.

On the diagram, shade the region where Jasper can go. [3]



Scale: 1 cm to 1 m.

3. M/J 15/P12/Q14

In triangle ABC, $AB = 5\,\text{cm}$ and $AC = 6\,\text{cm}$.

(a) Construct triangle ABC.
Line BC is drawn for you.

B ——————————————— C

[2]

(b) Measure $B\hat{A}C$ in your triangle.

Answer ..... [1]

Answers Section

1. M/J 18/P12/Q19

(a)	Acceptable perpendicular bisector of AB	**1**
(b) (i)	Arc, centre C, radius 7 cm	**1**
(ii)	Bisector of angle BAC	**1**
(c)	P_1 and P_2 marked at intersections of *their* **(a)** with **(b)(i)** and **(b)(ii)**	**1**

2. M/J 18/P11/Q10

Correct region shaded **3**

3. M/J 15/P12/Q14

(a) 6 **1**

(b) $b = \dfrac{8a - c^2}{3}$ oe 2