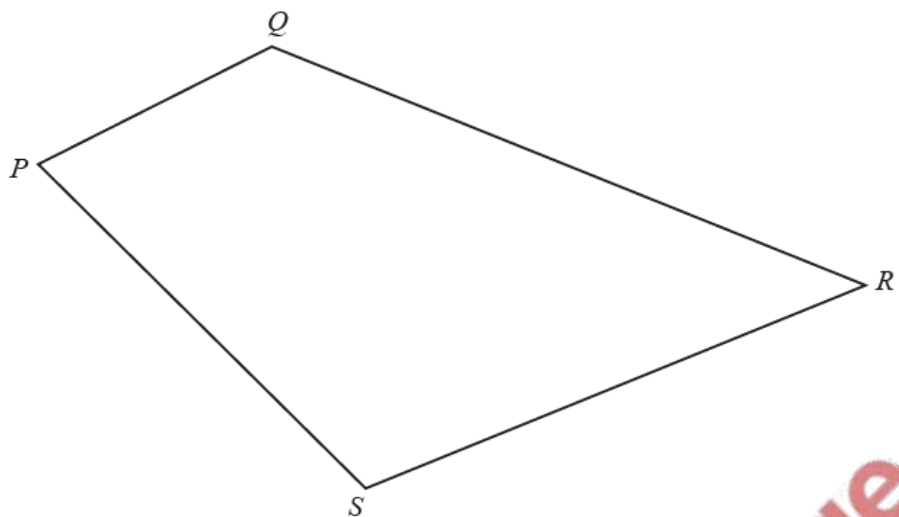


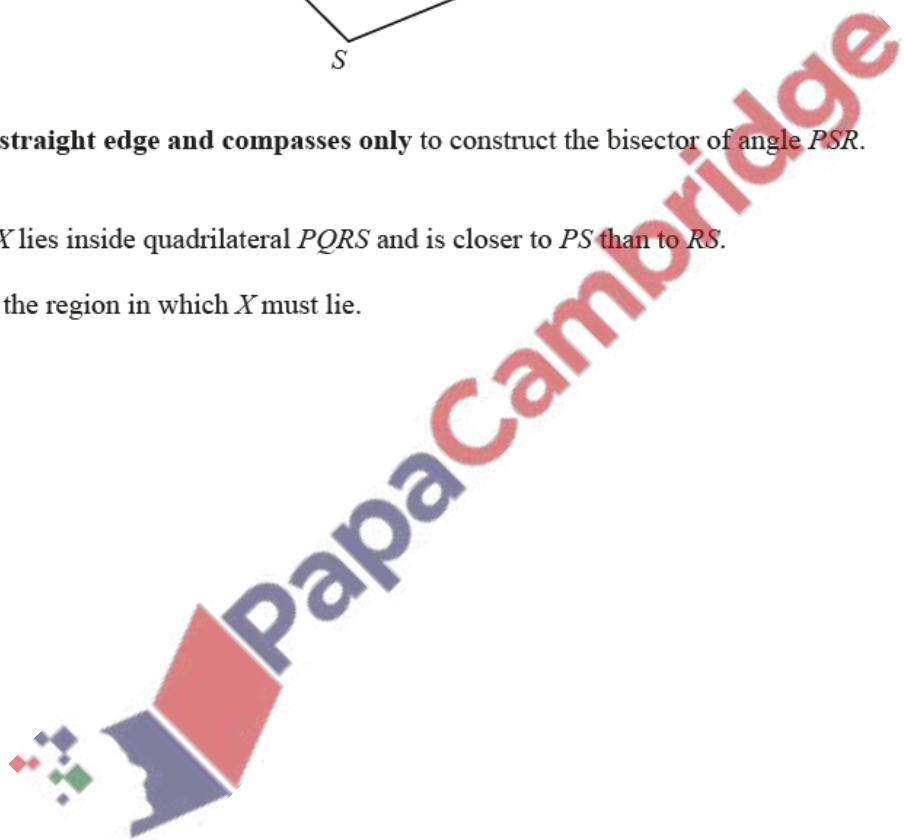
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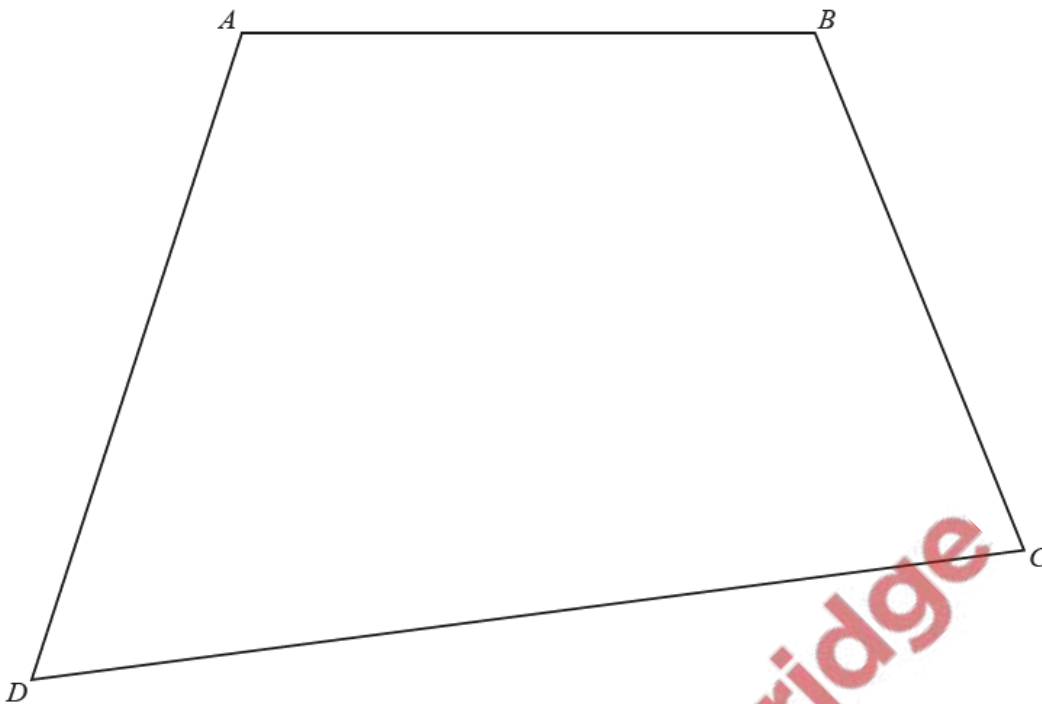


(a) Use a straight edge and compasses only to construct the bisector of angle  $PSR$ . [2]

(b) Point  $X$  lies inside quadrilateral  $PQRS$  and is closer to  $PS$  than to  $RS$ .

Shade the region in which  $X$  must lie. [1]





Scale: 1 cm to 50 m

The diagram shows a field,  $ABCD$ , drawn to a scale of 1 cm to 50 m.

- (a) The field has a straight path from  $D$  to the midpoint of  $AB$ .

Draw the path and measure the angle the path makes with  $DC$ .

..... [2]

- (b) Grass is to be planted on an area of the field.

The area to be planted is to be

- less than 325 m from  $B$
  - nearer to  $CB$  than  $CD$
- and
- can only be on one side of the path.

By drawing appropriate loci, find and shade the largest possible area for the grass to be planted. [4]

- (c) Find the **actual** length of the part of the path that forms a boundary for the grass.

..... m [1]