

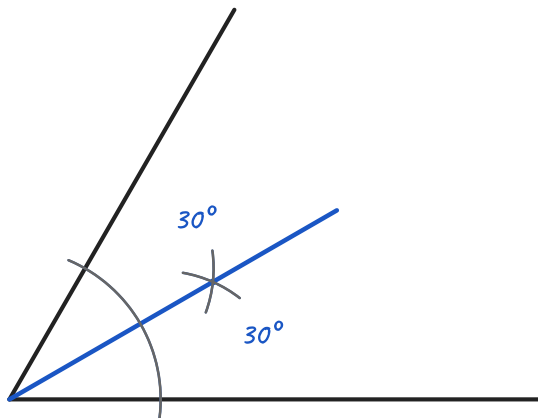
Constructing an Angle Bisector

ANSWERS

1

The arcs are drawn.

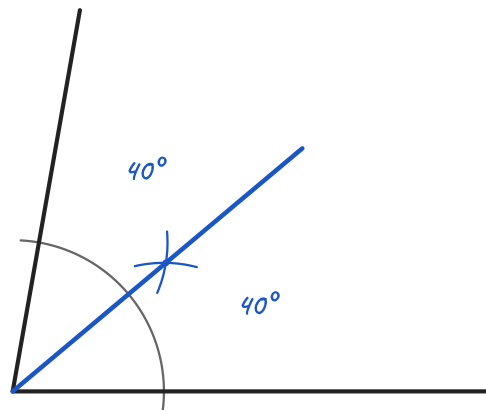
Construct the bisector of the angle. Leave your arcs showing.



2

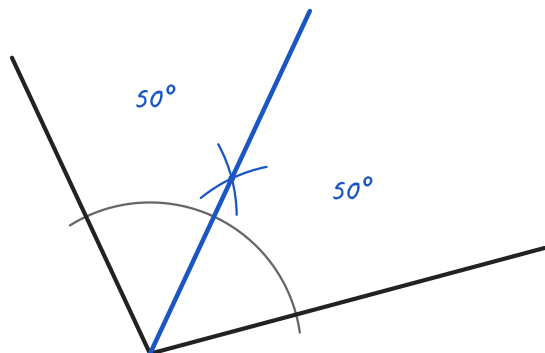
The first arc is drawn.

Construct the bisector of the angle. Leave your arcs showing.



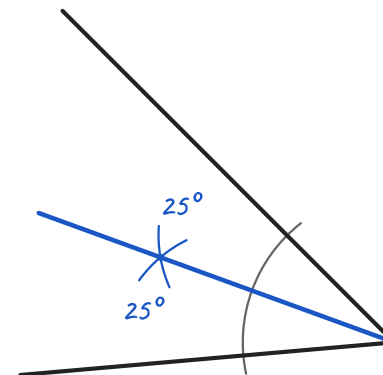
3

Construct the bisector of the angle. Leave your arcs showing.



4

Construct the bisector of the angle. Leave your arcs showing.

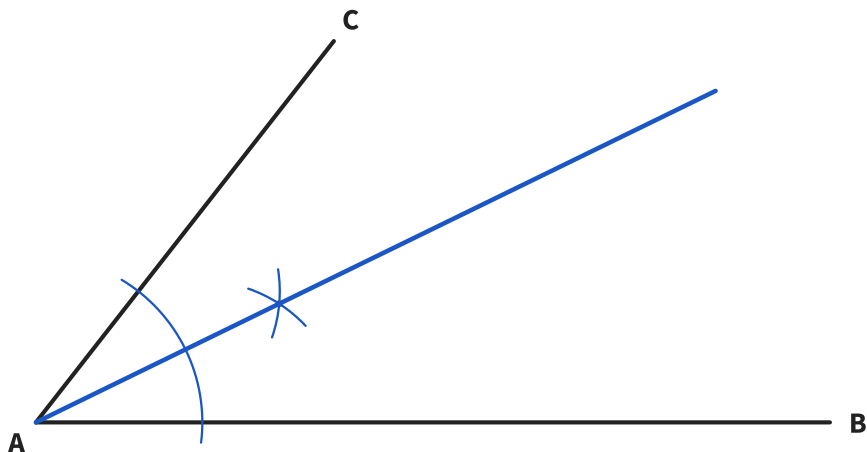


Constructing an Angle Bisector

ANSWERS

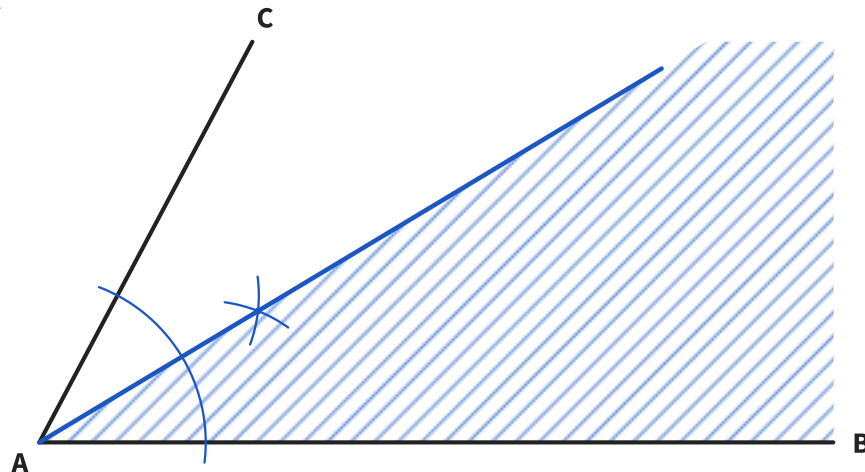
5 *Notice the change!*

Draw the locus of points that are the same distance from the line AB as from the line AC.



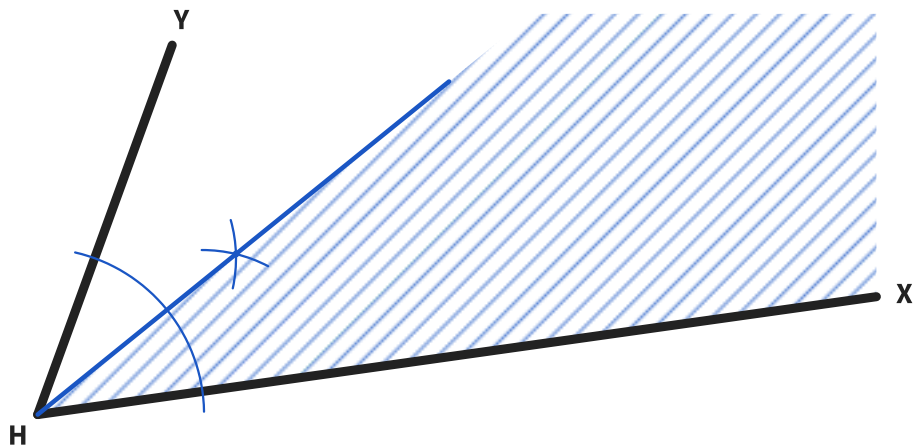
6

Shade the region inside angle BAC of points that are nearer to the line AB than to the line AC.



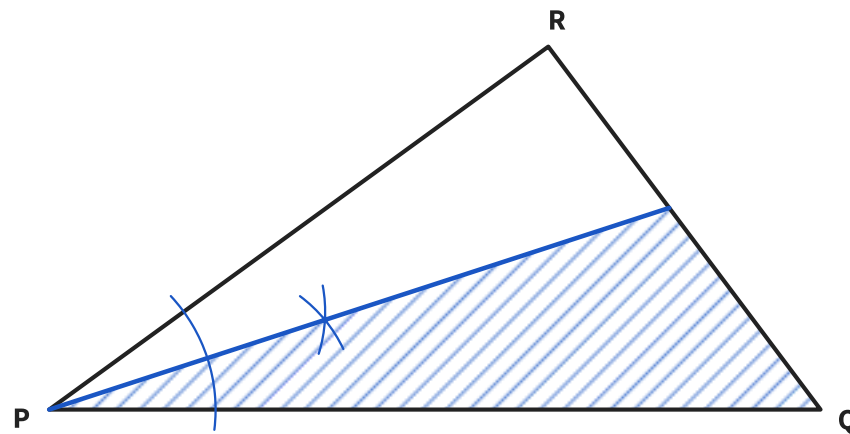
7

Two straight hedges meet at H. Sheep must stay nearer to the hedge HX than to the hedge HY. Shade where the sheep can go.



8

Shade the region inside triangle PQR of points that are nearer to the side PQ than to the side PR.

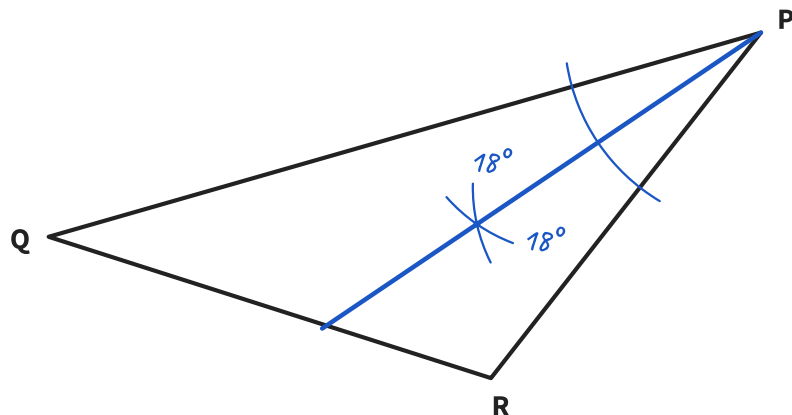


Constructing an Angle Bisector *further practice*

ANSWERS

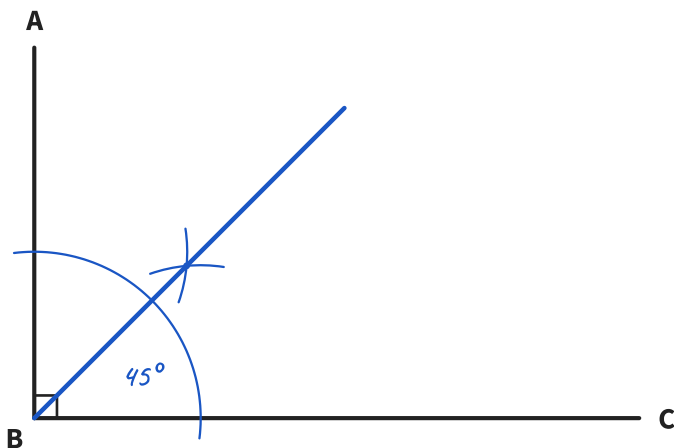
9

Construct the bisector of angle QPR.
Leave your arcs showing.



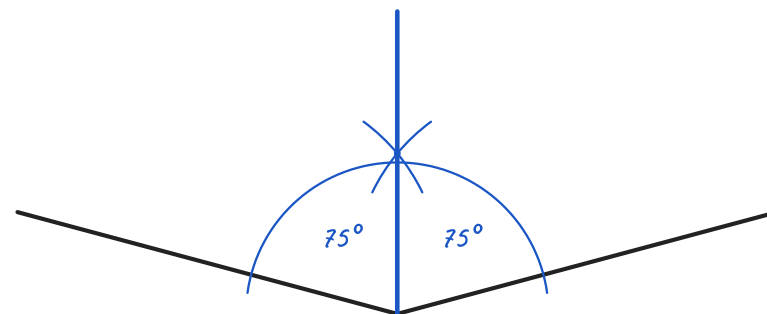
11

Angle ABC is a right angle at the corner of a picture frame. The corner is cut at 45° to both sides. Use a construction to draw the cut.



10

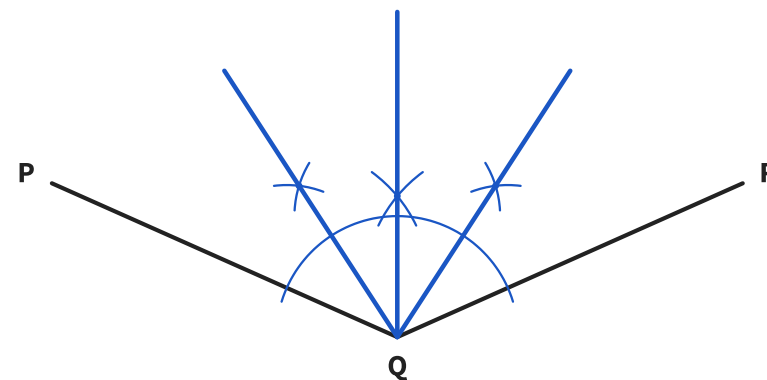
Construct the bisector of the angle. Then measure one of the two angles you have made.



Answer 75° (accept 73° to 77°)

12

Use constructions to split angle PQR into four equal angles. Work out the size of each one.



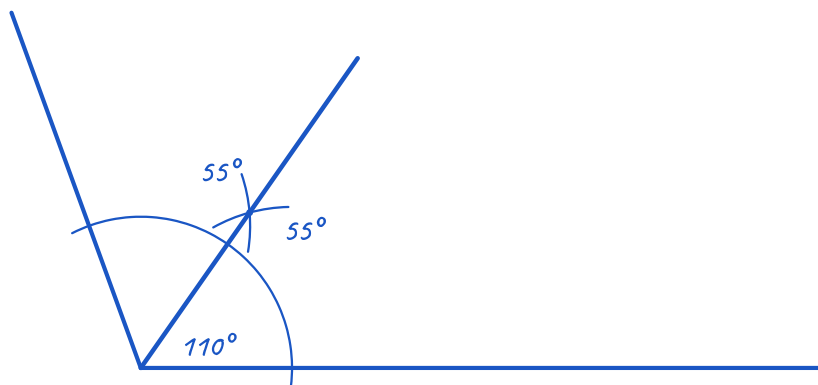
Answer 33° each, because $132 \div 4 = 33$

Constructing an Angle Bisector *further practice*

ANSWERS

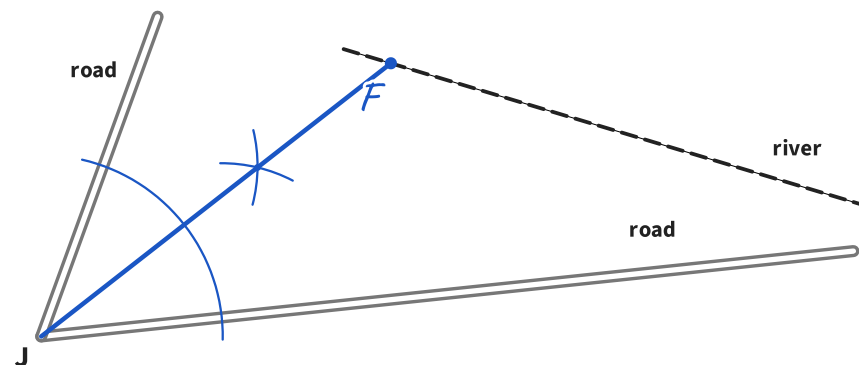
13

Use a protractor to draw an angle of 110° . Then construct its bisector.



14

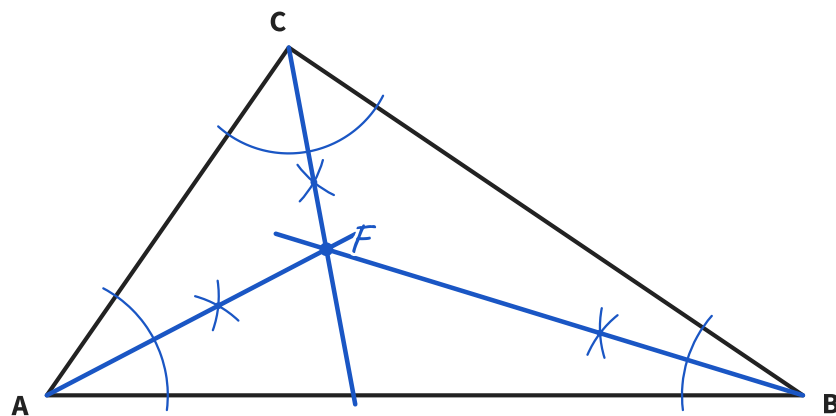
Two roads meet at junction J. A footpath splits the angle between them in half and meets the river at F. Scale: 1 cm represents 50 m. How far is J from F?



JF = about 295 m (accept 285 to 305 m)

15

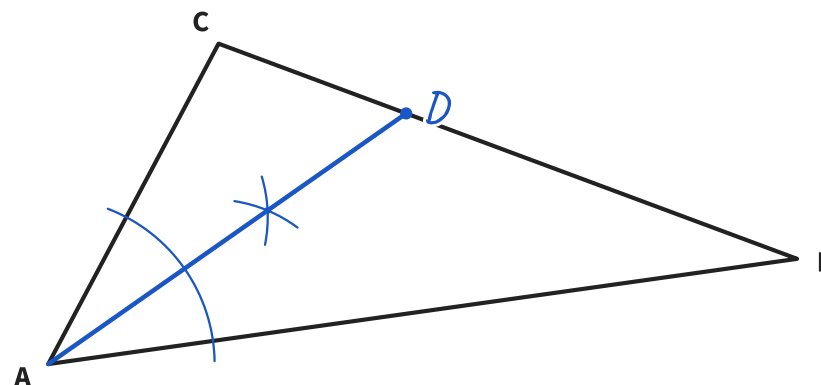
A fountain F goes where the bisectors of angles A and B of courtyard ABC cross. Construct them and mark F. Then bisect angle C. What do you notice?



Answer The bisector of angle C goes through F too.

16

Lou says the bisector of angle BAC always cuts BC in half. Construct the bisector of angle BAC. Use your drawing to show that Lou is wrong.



Answer It meets BC at D. $BD = 5.5$ cm and $DC = 2.6$ cm, which are not equal.