

Name:

Exam Style Questions

Constructions



Corbettmaths

Equipment needed: Pencil, Ruler, Pair of Compasses

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

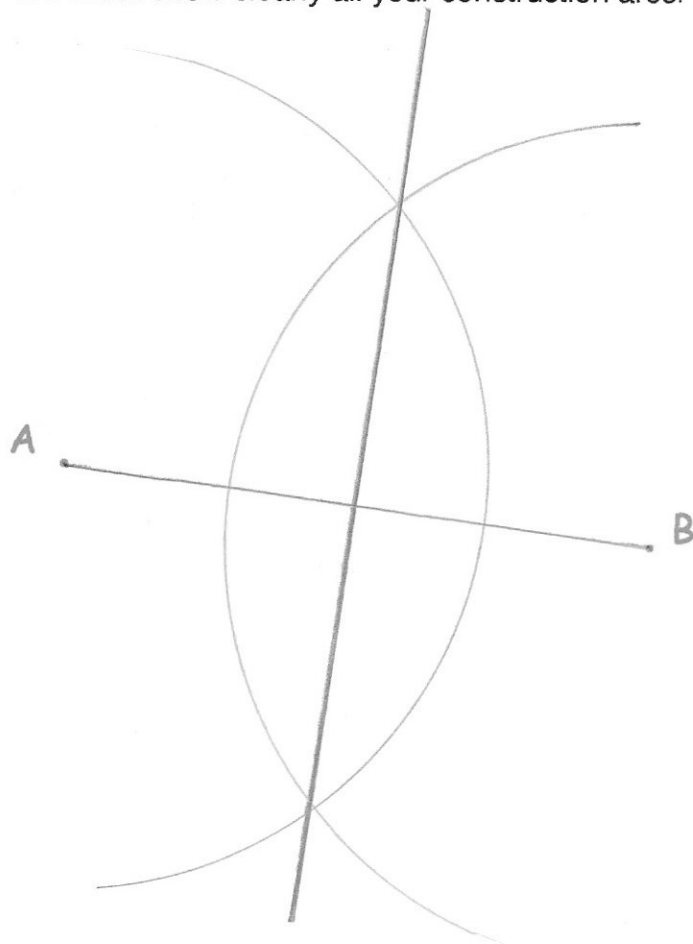
Videos 72, 73, 74,  
78, 79, 80



Answers and Video Solutions

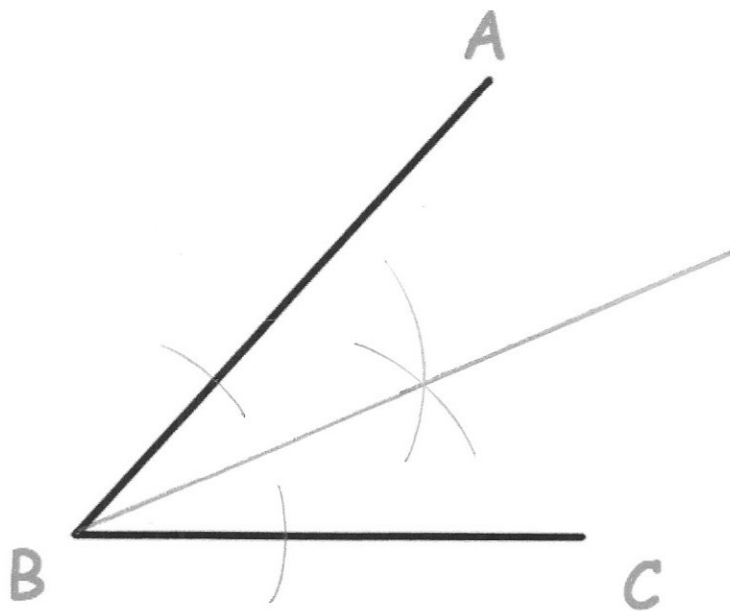


1. Use ruler and compasses to construct the perpendicular bisector of AB. You **must** show clearly all your construction arcs.



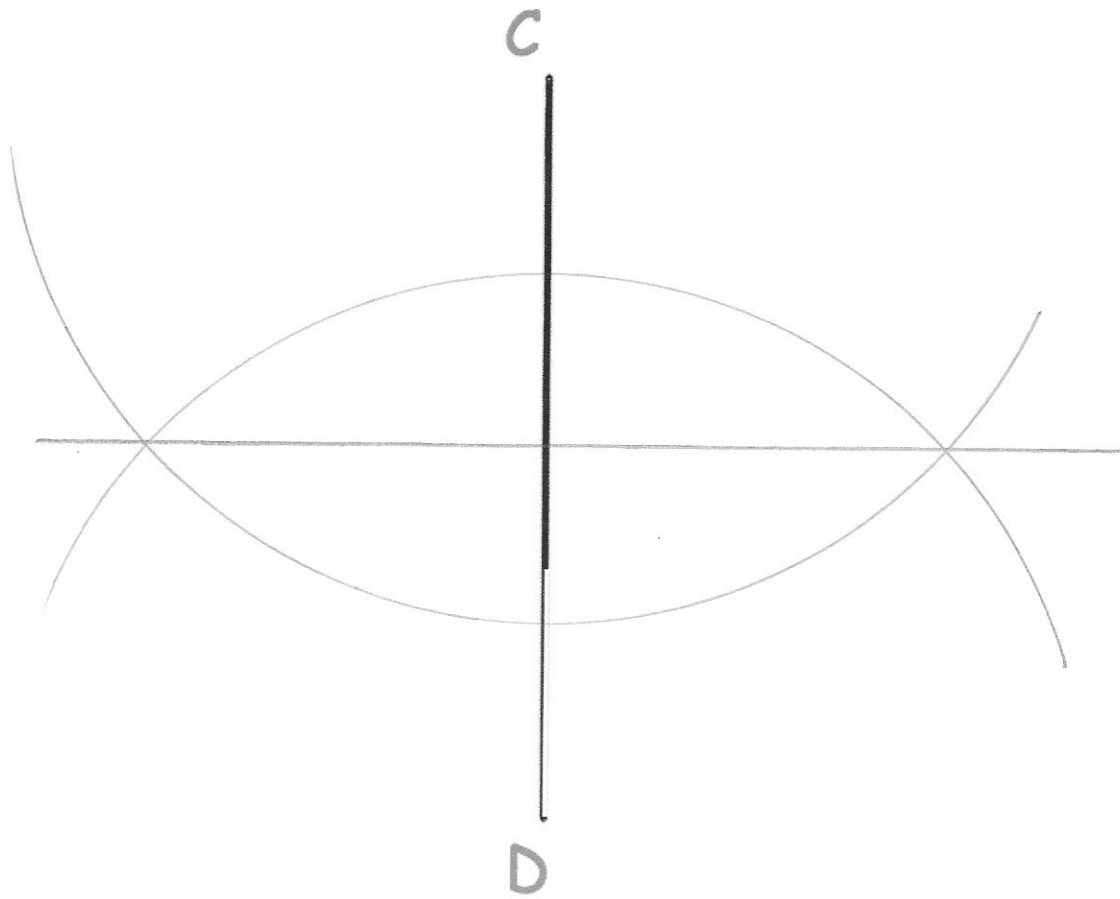
(2)

2. Using ruler and compasses, construct the bisector of angle ABC.



(2)

3.

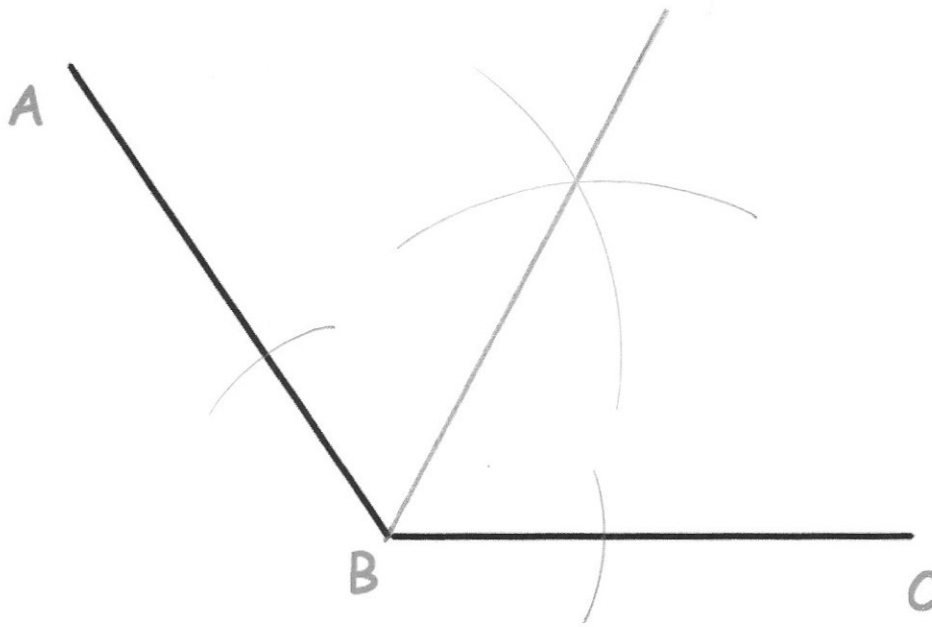


The line CD is drawn above.

Use ruler and compasses to construct the perpendicular bisector of CD.  
You **must** show clearly all your construction arcs.

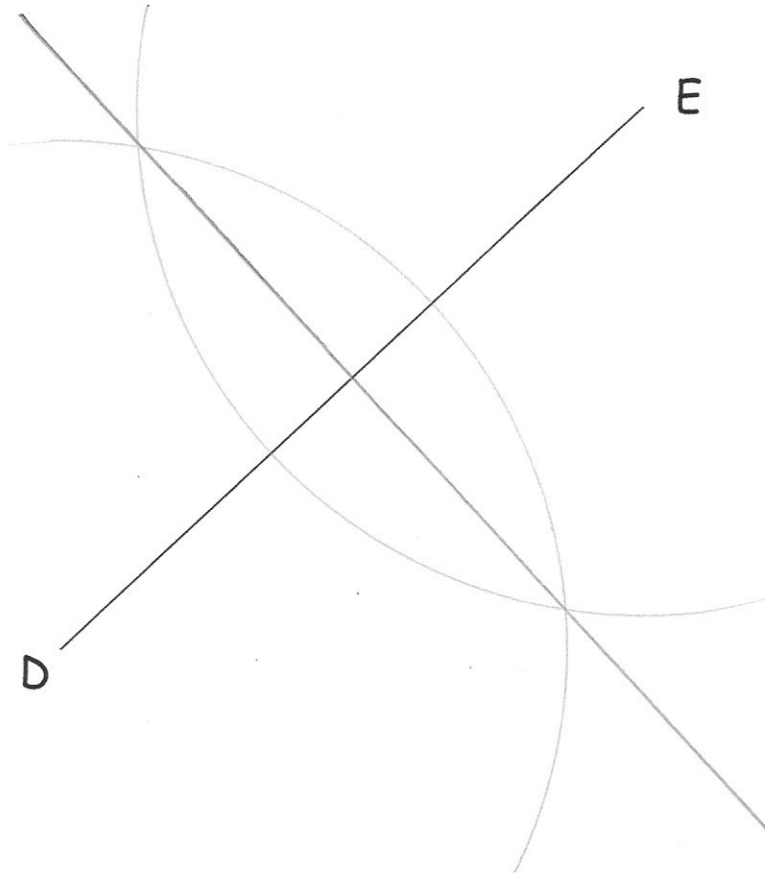
(2)

4. Using ruler and compasses, construct the bisector of angle ABC.



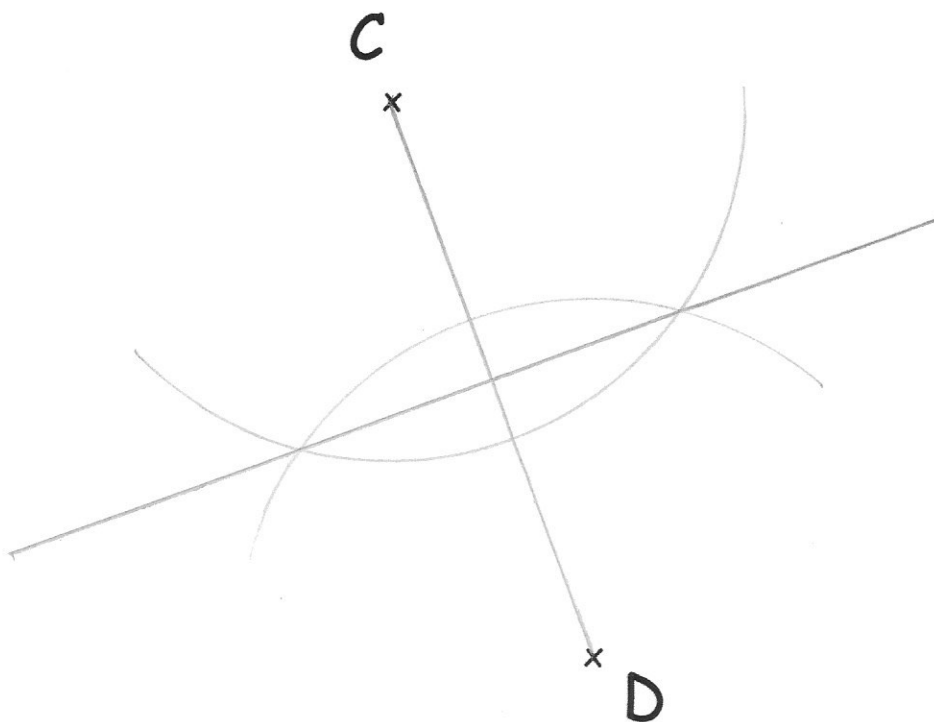
(2)

5. Use a ruler and compasses to construct the perpendicular bisector of  $\overline{AB}$ .



(2)

6. Shown below are points C and D.



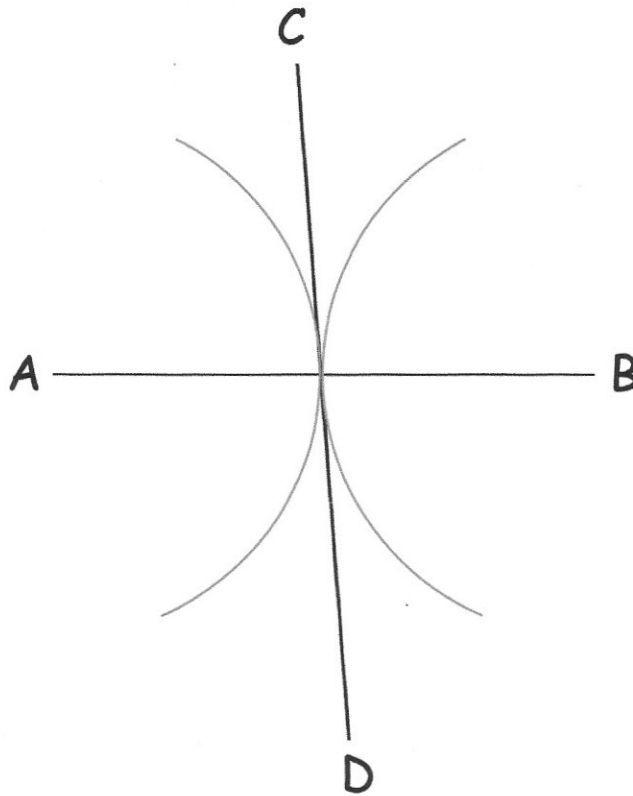
Construct a locus of points that are equidistant from points C and D.

(2)

7. Theodore was asked to construct the perpendicular bisector of the line AB.



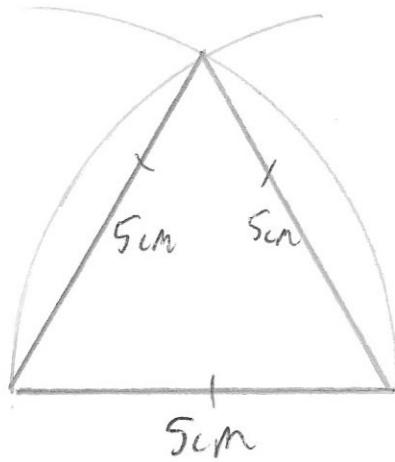
He has labelled his answer, CD.



Explain Theodore's mistake.

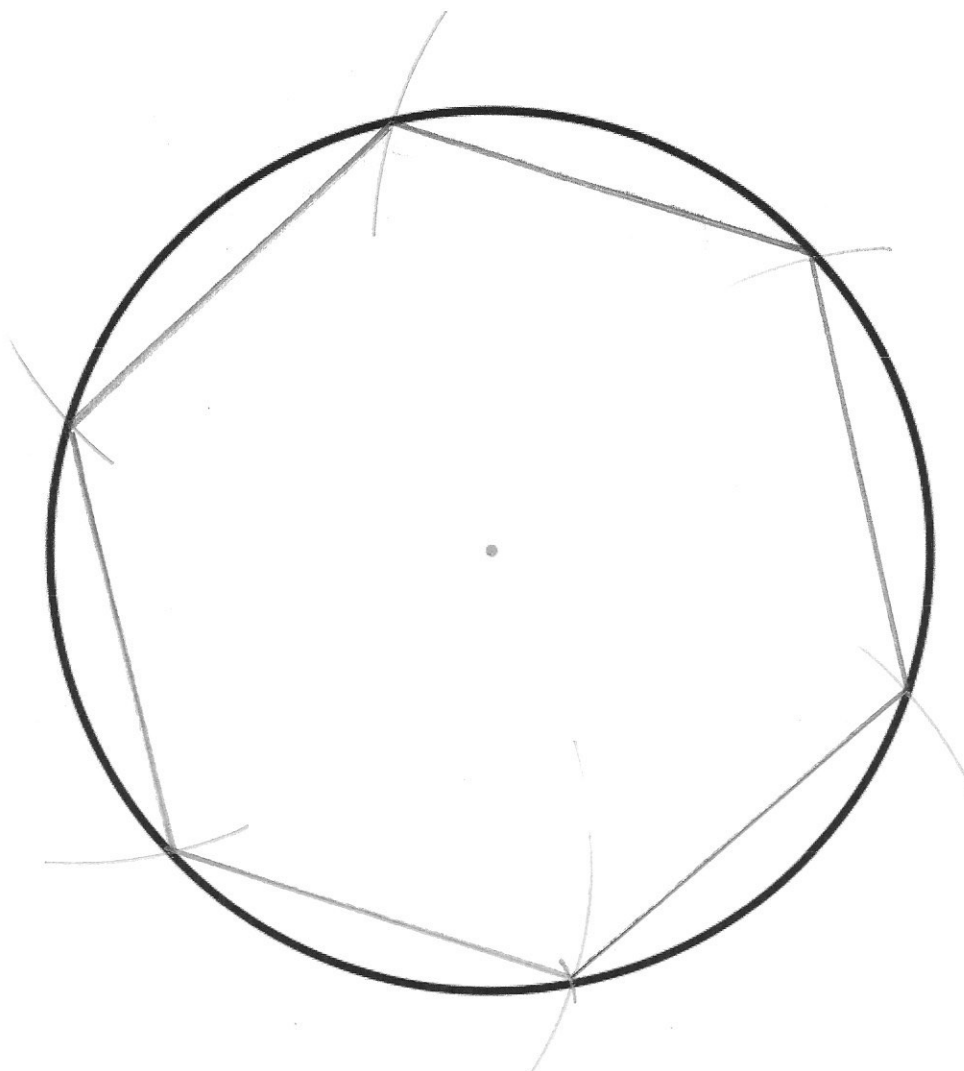
The arcs drawn from points A & B need to be greater than half the length of AB.  
He needed to set the compass/pencil to a larger size/radius.  
(1)

8. In the space below, use ruler and compasses to construct an equilateral triangle with sides of length 5cm.



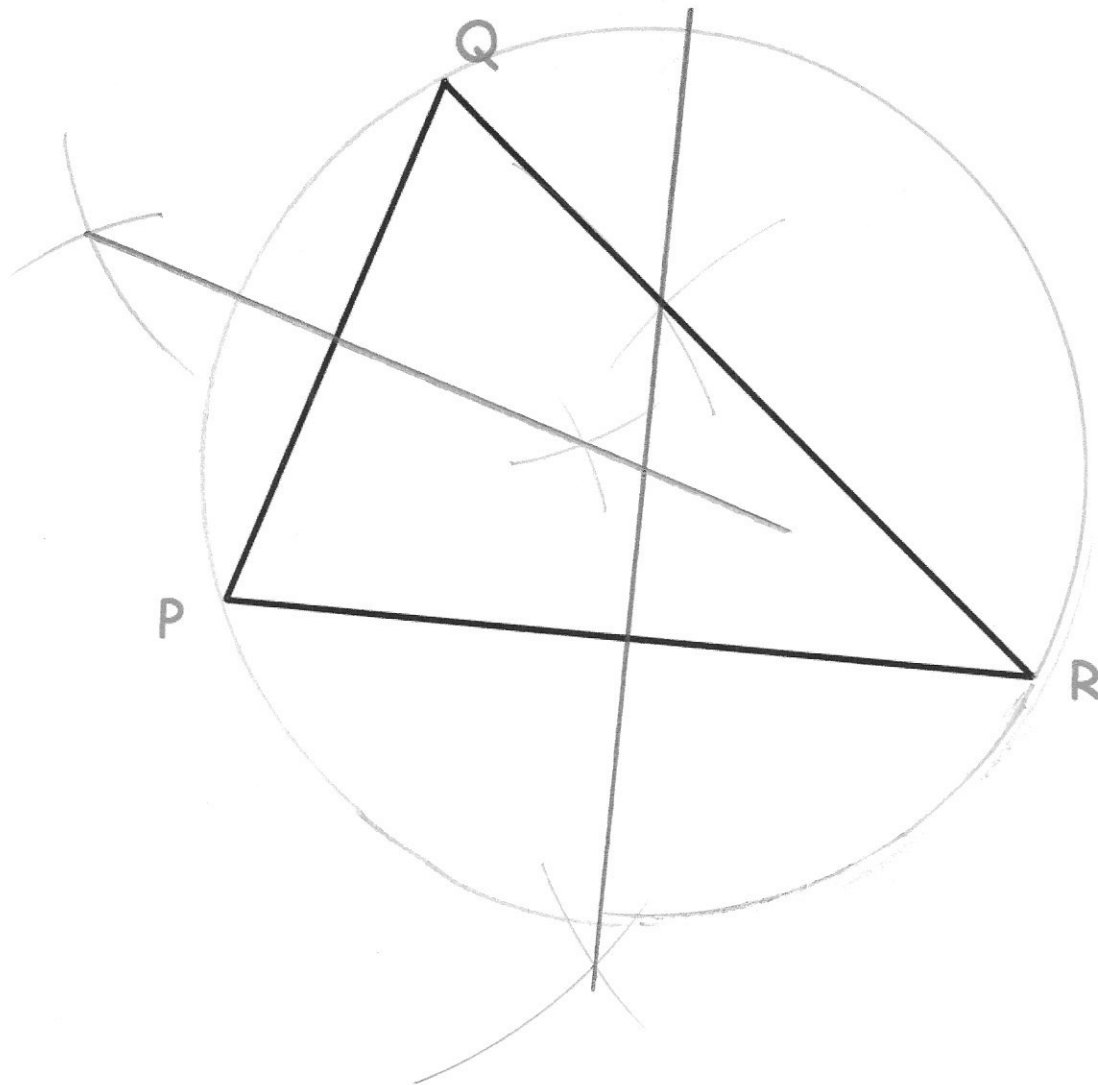
(2)

9. Use a ruler and compasses to construct a regular hexagon that is inscribed in the circle below.



(2)

10. The diagram shows a triangle, PQR.



- (a) Using a ruler and compasses only, construct the perpendicular bisector of PR.  
You **must** show clearly all your construction arcs.

(2)

- (b) Repeat this construction on another side of the triangle.

(1)

- (c) The point of intersection of the two bisectors is the centre of the circle that passes through P, Q and R.

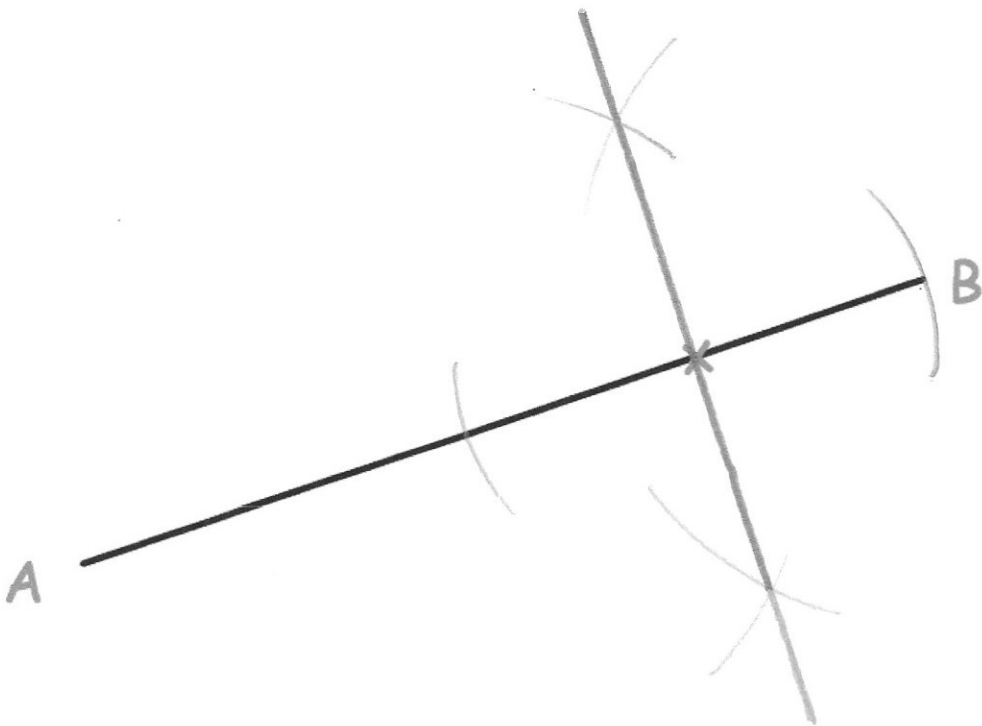
Draw this circle.

(2)

11. Use a ruler and compasses to construct the perpendicular to the line segment AB that passes through the point P.



You must show all construction lines.

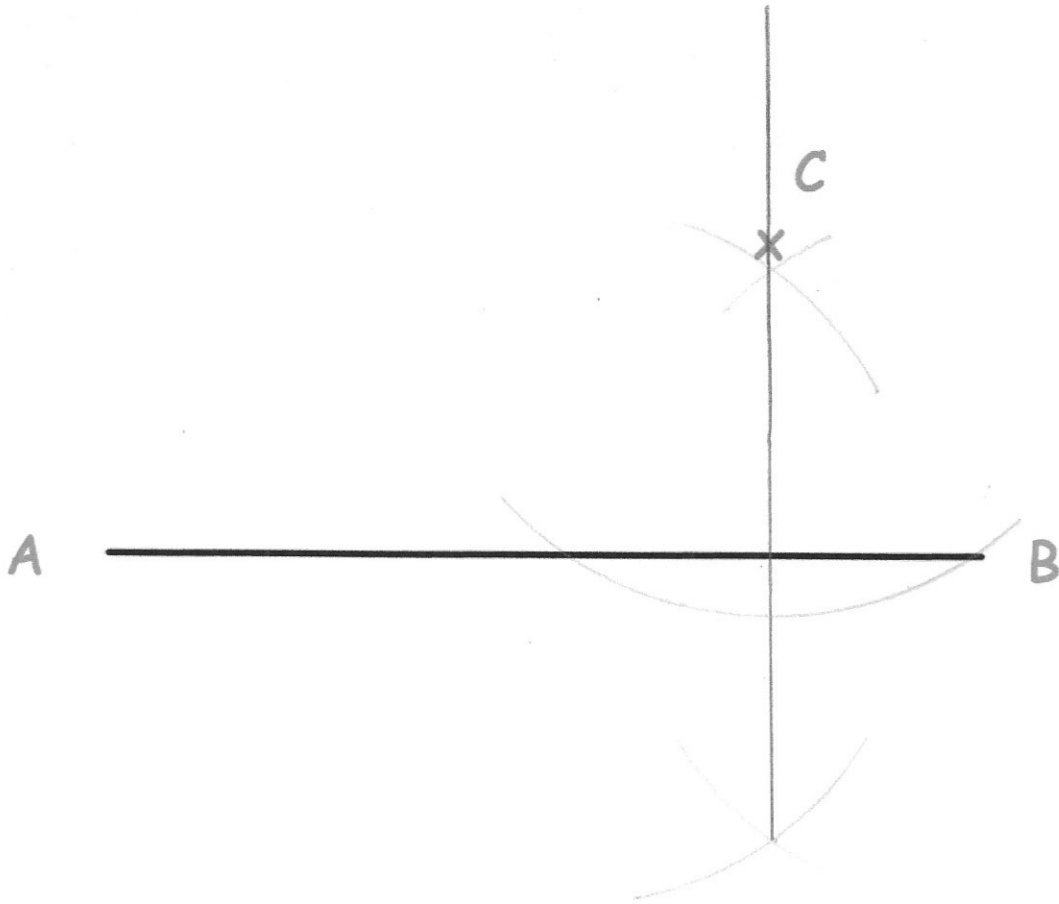


(2)

12. Use a ruler and compasses to construct the perpendicular from the line segment AB to the point C.



You must show all construction lines.

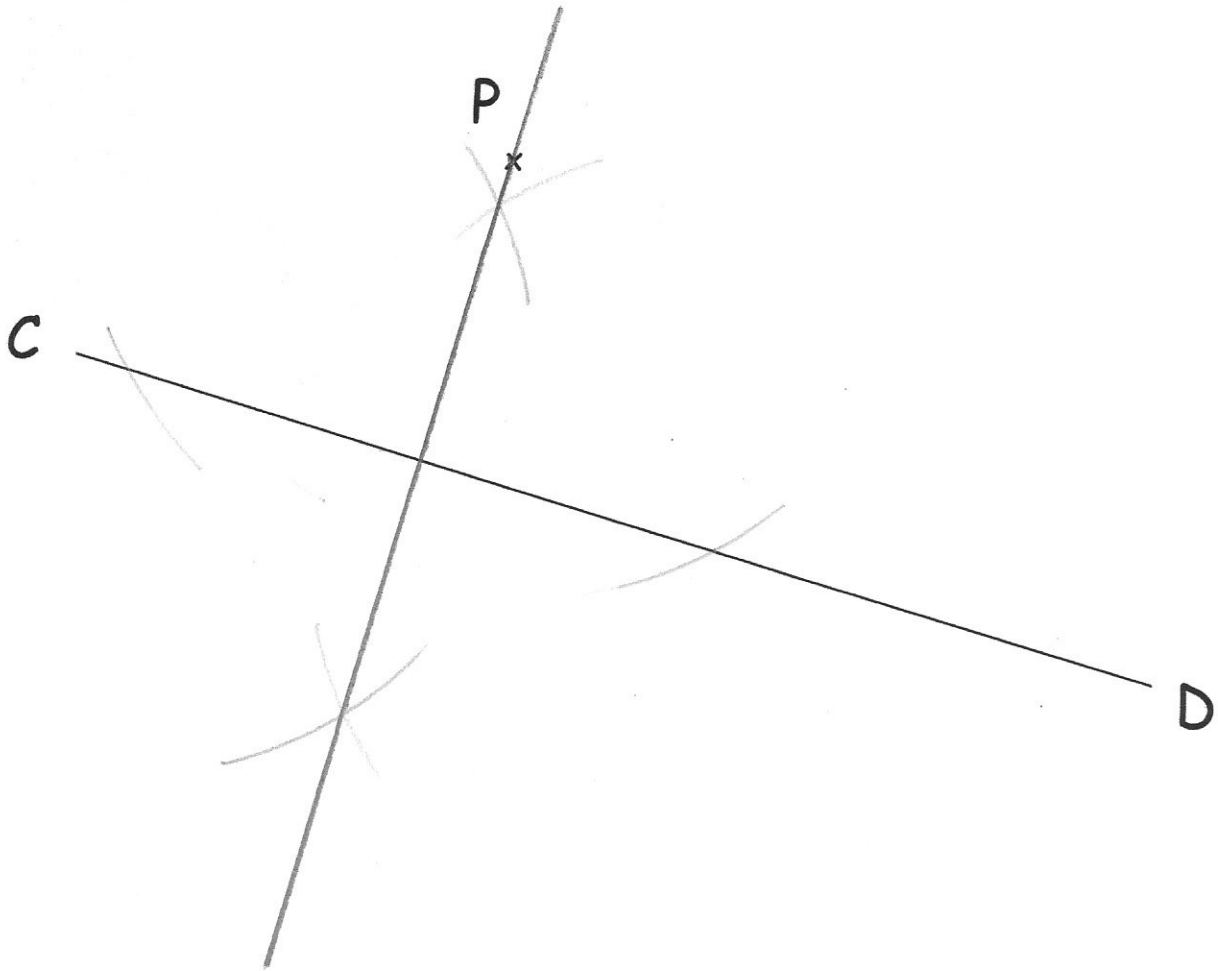


(2)

13. Construct the perpendicular from the point P to the line CD.



You must show all construction lines.



(2)