Topic 10 Constructions and loci (Post-TT) [18]

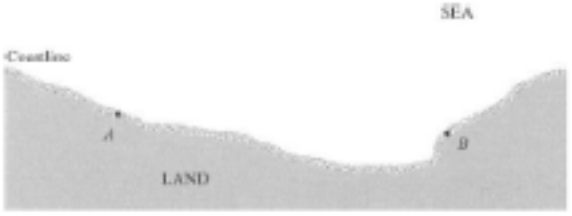
1. **Protractor needed**

In triangle PQR, the side $PQ = 7.5$ cm.
Angle $P = 70°$ and angle $R = 80°$.
Make an accurate drawing of the triangle.

(Total 3 marks)

2.

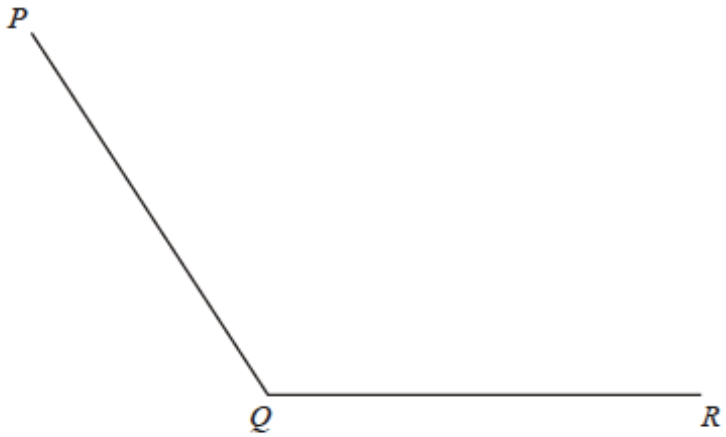
Draw a rough copy of the diagram below with A and B being 10cm apart. Two lifeboat stations A and B receive a distress call from a boat. (1cm = 1 km).
The boat is within 6 kilometres of station A.
The boat is within 8 kilometres of station B.
Shade the possible area in which the boat could be.



(2)

3.

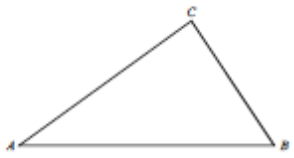
Using ruler and compasses only, construct the bisector of angle PQR.



(Total 2 marks)

4.

The diagram shows a triangle, ABC. Draw a rough, enlarged copy of the triangle (angles and lengths do not need to be accurate).



(a) Using a ruler and compasses only, construct the perpendicular bisector of AB.
You **must** show clearly all your construction arcs. **(2)**

(b) (i) Repeat this construction on another side of the triangle. **(1)**

(ii) The point of intersection of the two bisectors is the centre of the circle which passes through A, B and C.

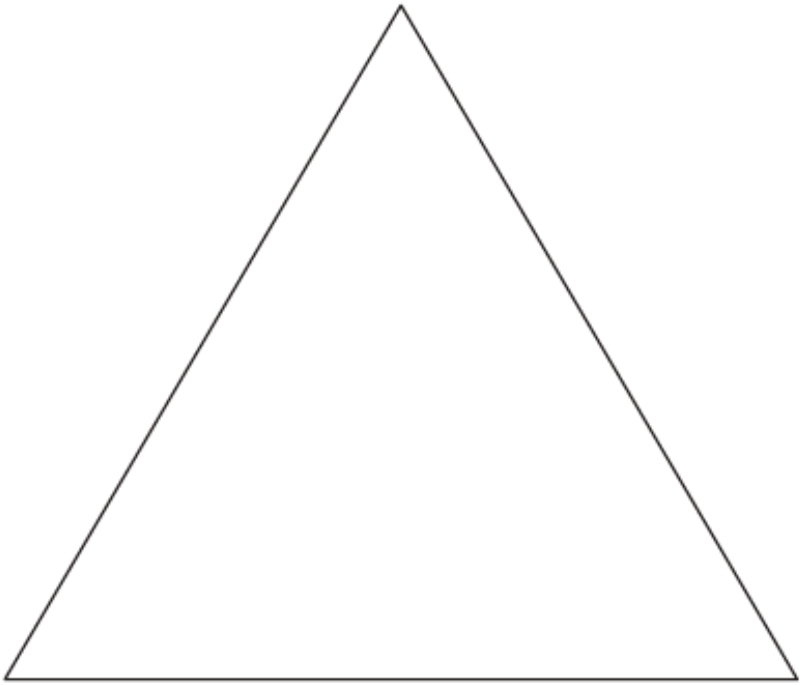
Draw this circle. **(2)**

(Total 5 marks)

5.

In this question, you should use a ruler and compasses.

The diagram shows an equilateral triangle of side 10 cm.



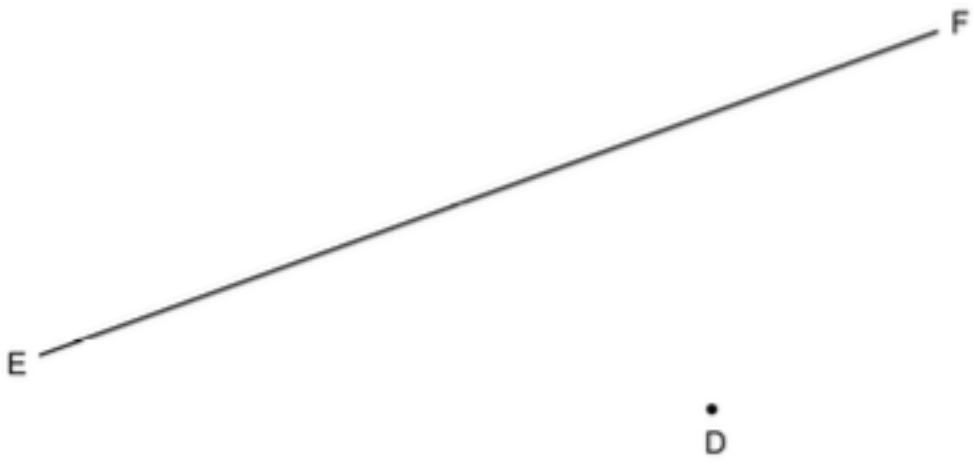
Show on the diagram all the points inside the triangle that are more than 5 cm from each vertex of the triangle.

You **must** show clearly all your construction arcs.

(Total 3 marks)

6.

Find, by construction, the shortest distance from D to the line EF.
Show all your construction lines.



(Total 3 marks)