Test - Constructions, loci, bearings, plans and elevations

Year: Year 11 · Duration: 45 minutes · /20

Name:	Date:	**Mark: /20**

Question	1	2	3	4	5	Total
marks	4	4	4	4	4	**20**
Mark						

Show your working.

Question 1 (4 marks)

Question 1 – Bearings

The bearing of B from A is 072°. C is 8 km due south of B.

a. Work out the bearing of A from B. (1 mark)
b. Work out the bearing of B from C. (1 mark)
c. Explain how you know that angle $ABC = 108^\circ$. (2 marks)

Question 2 (4 marks)

Question 2 – Scale

A map has scale $1 : 20\,000$.

a. A path is 6.5 cm long on the map. How long is it in kilometres? (2 marks)
b. A real distance of 2.4 km is shown on the map. How many centimetres is this? (2 marks)

Question 3 (4 marks)

Question 3 – Loci

A path AB is 5 m long. A flowerbed is the set of points within 3 m of the path.

a. Sketch the boundary of the flowerbed. (2 marks)
b. Work out the perimeter of the flowerbed to 1 decimal place. (2 marks)

Question 4 (4 marks)

Question 4 – Construction

Construct the perpendicular bisector of a line PQ of length 9 cm and describe it.

a. Describe the steps. (3 marks)
b. State a property of every point on the bisector. (1 mark)

Question 5 (4 marks)

Question 5 – Problem: a ship

A ship sails 15 km on a bearing of 030° and then 20 km on a bearing of 120°.

a. Work out the distance of the ship from its starting point. (2 marks)
b. Work out the bearing of the ship from its starting point, to the nearest degree. (2 marks)