

Name:

Group 2

Result:

- 1.** *(3 points)*
Consider a triangle ABC with $AB = 6 \text{ cm}$ and $AC = 7 \text{ cm}$. Given that the area of the triangle is 12 cm^2 , find $\sin \alpha$ and hence find two possible values of BC .

2.*(3 points)*

Tomasz and Maria both start at point A . Tomasz walks 4 km on a bearing of 325 , Maria walks 5 km on a bearing of 070 . Find the distance between Tomasz and Maria and the bearing of Maria from Tomasz.

3.*(5 points)*

Consider a triangle ABC with $AB = 11$ cm, $AC = 8$ cm and $\angle BAC = 35^\circ$. Point D is on BC such that $BD : DC = 1 : 3$. Find the length of AD .

4. *(5 points)*
The bearing of a tower from points A and B are 345 and 030 respectively. Angles of elevation from points A and B to the top of the tower are 5° and 4° respectively. Point B is 400 metres West of point A . Find the height of the tower.