

5. Find AB to the nearest tenth of a metre. (4 marks)

APPLICATION: Draw diagrams for all the word problems.

6. The angle of elevation to the top of a lighthouse is 40° from a point 70 m from the base of the lighthouse. Find the height of the lighthouse to the nearest metre. (3 marks)
7. Katrina's cell phone detects two transmission antennas, one is 8 km away and the other is 14 km away. From her position, the two antennas appear separated by an angle of 75° . How far apart, to the nearest kilometer, are two antennas? (3 marks)
8. An isosceles triangle has two 6 cm sides and two 35° angles. Calculate the perimeter of the triangle to the nearest centimetre. (4 marks)
9. A surveyor is surveying three locations (M, N, and P) for the new rides in an amusement park around an artificial lake. $\angle MNP$ is measured as 57° . MN is 728 m and MP is 638 m. What is the angle at M to the nearest degree? (4 marks)

TIPS

10. Three circles with radii (radius) of 3 cm, 4 cm, and 5 cm are touching each other as shown. A triangle is drawn connecting the three centres. Calculate all the interior angles of the triangle to the nearest degree. (4 marks)

11. To measure the height, XY, of an inaccessible cliff, a surveyor recorded the data shown. Find the height of the cliff to the nearest metre. (3 marks)

COMMUNICATION:

12. Explain when the sine law can be used. (2 marks)

13. Explain when the cosine can be used. (3 marks)

14. Fill in the blanks:

The _____ theorem is used only in _____ triangles. The longest side is called the _____ and it's always located across from the _____.
(4 marks)