

# Year Ten Advanced Homework Sheet 2 Term 4

Name: \_\_\_\_\_

Due Date: \_\_\_\_\_

## Worded Problems – You must draw a diagram for each question

1. A 3 metres ladder leans against a wall so that the horizontal angle it makes with the ground is  $52^\circ$ . How far out from the wall does the ladder reach?

2. A ladder leans against a wall so that it is 1.5 m up the wall and 4.2 m out from the wall. Find the angle the ladder makes with the vertical.

3. A ship sails from port in the direction  $N 40^\circ E$ . After the ship has sailed 25km, how far east of port is it? Draw a diagram.

4. A balloon is attached to a 12 m piece of string. If the balloon is blown to an angle of  $52^\circ$  from the vertical, find its vertical height above the ground.

5. Show the following on a diagram

- a)  $123^\circ T$
- b)  $N 15^\circ W$
- c)  $S 47^\circ E$
- d)  $260^\circ T$

6. While on vacation Aimee measured the angle of elevation to the top of a monument to be  $64^\circ$ . If she was standing 26.6 m away from the base of the monument, find the height of the monument? Provide a diagram?