### 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°. 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° 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° from the vertical, find its vertical height above the ground.  

5. Show the following on a diagram  
   a) 123° T  
   b) N 15° W  
   c) S 47° E  
   d) 260° T  

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