

## Trigonometry Word Problems

For each question you must draw and label a triangle that represents the situation. Round all answers to the nearest hundredth. Please complete these on a paper to turn in.

1. A ladder 7 meters long stands on level ground and makes a  $73^\circ$  angle with the ground as it rests against a wall.
  - a. How far from the wall is the base of the ladder?
  - b. How far up the wall does it go?

2. Ben is pulling on a toboggan rope with a force of 250 newtons. The rope makes a  $36^\circ$  angle with the ground. What force is actually working to move the toboggan to the right?



3. To site the top of a building 1000 feet away, you look up  $24^\circ$  from the horizontal. What is the height of the building?
4. If a boat going forward in still water suddenly encounters a crosscurrent of 4 miles per hour, causing the boat veer off course by  $34^\circ$ , how fast was the forward speed of the boat?
5. A guy wire is anchored 12 feet from the base of a pole. The wire makes a  $58^\circ$  angle with the ground. How long is the wire?