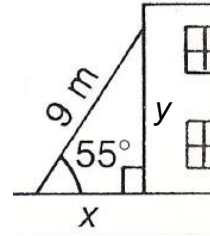


Name: _____ Period: _____

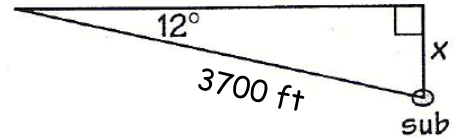
SM2 11.4 Trigonometry Story Problems

Read the following stories. Draw a picture if needed. Define the variable. Set up an equation. Solve the equation and show work. Be sure to label your answer. Round answers to the nearest tenth.

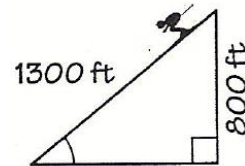
- As it leans against a building, a 9-meter ladder makes an angle of 55° with the ground.
 - How far is the bottom of the ladder from the base of the building?
 - How far up the building does the ladder reach?



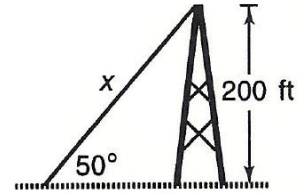
- A submarine dives at an angle of 12° to the surface of the water. When the submarine has traveled 3700 feet, how deep is it?



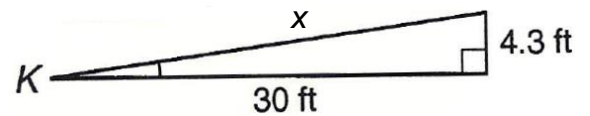
- A skier drops 800 vertical feet while skiing 1300 feet. What is the angle of the ski slope with the horizontal?



4. A cable from the top of a 200-ft telephone tower makes a 50° angle with the ground. How long is the cable?



5. A wheelchair ramp rises 4.3 ft over a distance of 30 ft.
- How long is the ramp?
 - What angle does the ramp make with the ground?



6. The top of an 18-ft waterslide is 14 ft above the ground.
- What angle does the slide make with the vertical ladder?
 - How far is the bottom of the slide from the bottom of the ladder?

