

- 5) Two boats leave a dock at the same time. Boat A goes due North 500 feet and stops.
Boat B goes due East 400 feet, stops and turns toward Boat A.
What angle must B turn to face and proceed directly to Boat A?
- 6) The *angle of elevation* from the top of a small building to the top of a nearby tall building is 47 degrees.
And, the *angle of depression* from the top of the small building to the bottom of the tall building is 15 degrees.
If the smaller building is 30 feet high, determine the height of the tall building.
- 7) The distance from the bottom of a ramp to the back of a moving truck is 11 feet.
If the angle between ramp and the ground is $21^{\circ}20'$, how high is the back of the truck off the ground?

8) Standing in a lighthouse, 150 feet above the shore, I spot a boat at an angle of depression of 11 degrees.
How far away is the boat from shore?

9) Looking out from a balcony, the angle of elevation to the top of the next building is approximately 22° .
And, the angle of depression to the bottom of the building is approximately 29° .
If the building is 200 feet away, how tall is it?

10) A hiker approximates an angle of elevation to the top of a hill to be 22 degrees.
After walking 700 feet closer, the hiker estimates the angle of elevation *increased* by 16 degrees.
Approximately, how high is the hill?