

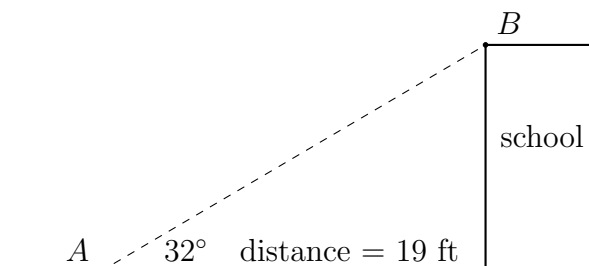
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BECA / Dr. Huson / Geometry 6 Trigonometry

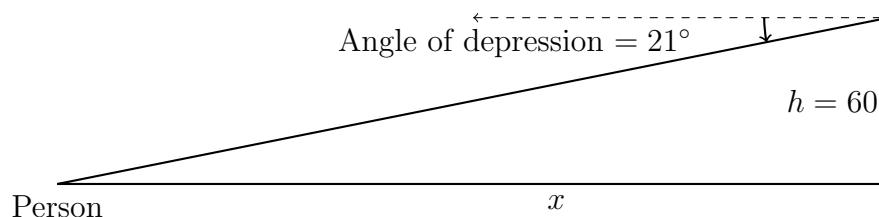
6.14 Pre-Quiz: Tangent applications**CCSS.HSG.SRT.C.8**

1. Shown is a building with student A on the ground waving up to student B . Point A is 19 feet from the base of the building, and the angle of elevation from A to B is 32° .

Find how high up student B is from the ground to the *nearest foot*. (not to scale)

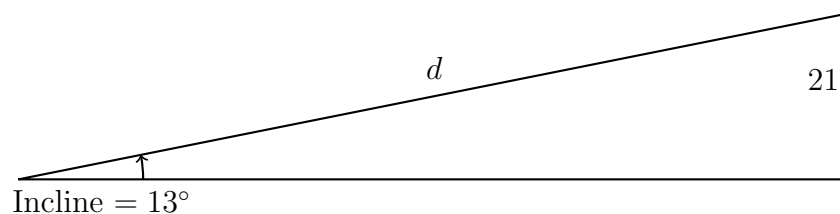


2. From the top of a subway station, a person is visible at an angle of depression of 21° . If the subway station is 60 feet tall, determine the distance from the person to the base of the subway station, x , to the *nearest foot*.



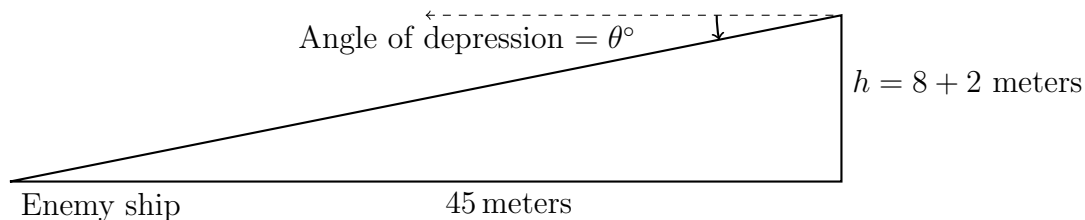
3. A child sleds from the top of a hill to a group of friends standing at the base of the hill. The hill is 21 feet tall, and the hill's incline is 13° . Find the distance, d , from the sledder to the group of friends to the *nearest foot*.

(hint: First find the horizontal distance, the base of the triangle. Then use the Pythagorean theorem to find the hypotenuse, d .)



4. A pirate, who is two meters tall, is standing on a mast 8 meters tall. Looking down, the pirate sees an enemy ship 45 meters away.

Find the angle of depression to the nearest degree.



5. A snowman is standing 10 meters away from the base of a set of monkey bars, looking up at a boy 3 meters off the ground. The snowman is 1 meter tall.

(a) Mark the triangle.

(b) Find the angle from the snowman's head to the boy, θ , to the nearest tenth degree.

(not drawn to scale)

