

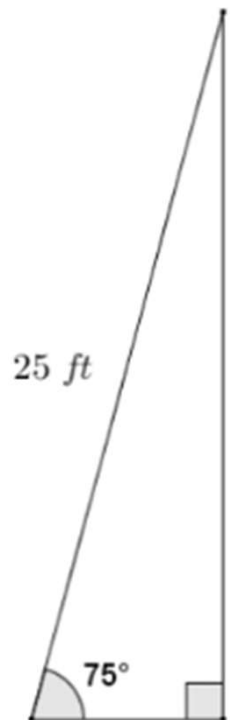
Trigonometry Worksheets

Find the missing side length of a right triangle

The Occupational Safety and Health Administration (OSHA) provides standards for safety at the workplace. A ladder is leaned against a vertical wall according to OSHA standards and forms an angle of approximately 75° with the floor

a. If the ladder is 25 ft. long, what is the distance from the base of the ladder to the base of the wall?

b. How high on the wall does the ladder make contact?



Trigonometry Worksheets

Find the missing side length of a right triangle

The Occupational Safety and Health Administration (OSHA) provides standards for safety at the workplace. A ladder is leaned against a vertical wall according to OSHA standards and forms an angle of approximately 75° with the floor

- a. If the ladder is 25 ft. long, what is the distance from the base of the ladder to the base of the wall?

Let b represent the distance of the base of the ladder from the wall in feet.

$$b = 25(\cos 75)$$

$$b \approx 6.5$$

The base of the ladder is approximately 6 ft. 6 in. from the wall.

- b. How high on the wall does the ladder make contact?

Let h represent the height on the wall where the ladder makes contact in feet.

$$h = 25(\sin 75)$$

$$h \approx 24.1$$

The ladder contacts the wall just over 24 ft. above the ground.

