

5.5 - Word Problems

Skills:

- Solve word problems with trigonometric functions
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The Steps

- Draw a diagram!
 - Decide which trigonometric function applies
 - Write an equation
 - Solve for the missing piece
 - Answer the question (with units)
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Example

A fire safety regulation states that the maximum safe angle of elevation for a rescue ladder is 72° . A fire department's ladder is 110 feet long. What is the maximum safe rescue height?

Example

An electrician is running a wire from a house to a pole 75 feet away. The angle of elevation from the house to the pole is 16° .

How much wire is needed to connect the house to the pole?

Example

At a particular time of day, a 3m tall lamp post casts a shadow that is 4m long. At that time, what is the angle of elevation of the sun?
