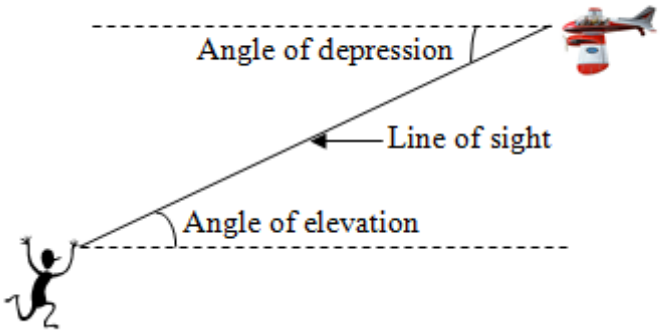
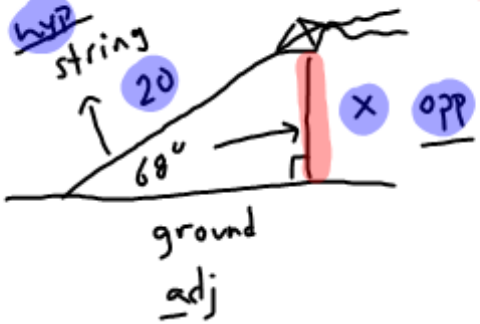
Trig Word Problems Scavenger Hunt Work Space wExamples [Compatibility Mode] - Microsoft Word

9.9 & 9.10. Honors Geometry

DATE: 4/11/13



1) A kite is flying at the end of a 20-meter string. If the string makes an angle of 68° with the ground, how high, to the nearest meter, is the kite?



So use sine:

$\frac{\sin 68°}{1} = \frac{x}{20}$

$20 \cdot \sin 68° = x$

$19 = x$

∴ The kite is 19m above the ground.

2) A ladder 25 feet long leans against a building and reaches a point 23.5 feet above the ground

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2) A ladder 25 feet long leans against a building and reaches a point 23.5 feet above the ground. Find, to the nearest degree, the angle that the ladder makes with the ground.

$$\sin x^\circ = \frac{23.5}{25}$$

$$\sin^{-1}\sin x^\circ = \sin^{-1}\left(\frac{23.5}{25}\right)$$

$$x = 70^\circ$$

∴ The ladder makes 68° angle with the ground.

3) A straight road is inclined upward at an angle of 16° with the horizontal. If you walked a distance of 2,500 feet up the road, find, to the nearest foot, your increase in altitude.

You try it! Answer: 689 ft

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