

Honors Geometry

Notes Section 7.6

Apply the Sine and Cosine Ratios

VOCABULARY

Sine: _____

Cosine: _____

Angle of Elevation:

Angle of Depression:

EXAMPLE 1 Find $\sin S$ and $\sin R$. Write each answer as a fraction and as a decimal rounded to four places.

$\sin S =$ _____



$\sin R =$ _____

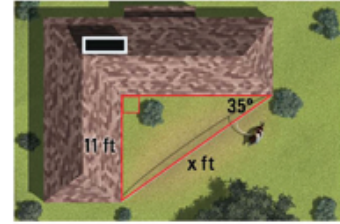
EXAMPLE 2 Find $\cos U$ and $\cos W$. Write each answer as a fraction and as a decimal rounded to four places.

$\cos U =$ _____

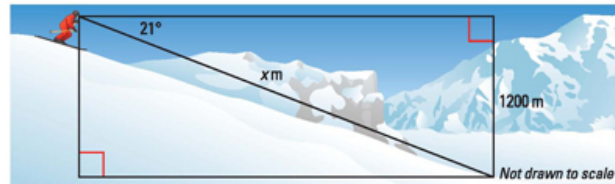


$\cos W =$ _____

EXAMPLE 3 You want to string a cable to make a dog run from two corners of a building. Write and solve a proportion using a trigonometric ratio to approximate the length of cable (x) you will need and y.



EXAMPLE 4 You are skiing on a mountain with an altitude of 1200 meters. The angle of depression is 21 degrees. About how far do you ski down the mountain?



EXAMPLE 5 You want to build a skateboard ramp with a length of 14 feet and an angle of elevation of 26 degrees. You need to find the height and length of the base of the ramp.



EXAMPLE 6 Use special right triangles to find the sine & cosine of a 60° angle, 30° angle and 45° angle.

$$\sin 60^\circ = \text{-----}$$

$$\sin 30^\circ = \text{-----}$$

$$\cos 60^\circ = \text{-----}$$

$$\cos 30^\circ = \text{-----}$$

$$\sin 45^\circ = \text{-----}$$

$$\cos 45^\circ = \text{-----}$$

