## Answer on Question \#44618 - Math - Trigonometry

## Question.

Find the area of the triangle with the given measurements. Round the solution to the nearest hundredth if necessary.

Given:
$A=46^{\circ}$
$b=27 f t$
$c=14 \mathrm{ft}$
Find:
$S=$ ?

## Solution.

By definition, we can find the area of triangle by the following formula:

$$
S=\frac{1}{2} a \cdot b \cdot \sin \gamma
$$

In our case, this formula will be the following:

$$
S=\frac{1}{2} b \cdot c \cdot \sin A
$$

Calculate:

$$
S=\frac{1}{2} \cdot 27 \cdot 14 \cdot \sin 46^{\circ}=27 \cdot 7 \cdot 0.719 \approx 135.89 \mathrm{ft}^{2}
$$

## Answer.

$S=\frac{1}{2} b \cdot c \cdot \sin A=135.89 f t^{2}$

