## 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 ft

c = 14 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:

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

Answer.

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

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