

Application of the Standard Law of Sines - Guided Lesson Explanation**Explanation#1**

Step 1) We should know what we have to be find out.

"Find the length of 'x'."

$$\text{Step 2) } \frac{x}{\sin X} = \frac{y}{\sin Y}$$

$$\frac{x}{\sin 16} = \frac{17}{\sin 0.4}$$

$$x \times \sin 0.4 = 17 \times \sin 16$$

$$x \times 0.007 = 17 \times 0.2756$$

$$x = \frac{17 \times 0.27563735581}{0.00698126029}$$

$$x = 671.20$$

So, the answer is 671.20

Explanation#2

Step 1) We should know what we have to be find out.

"Find side 'r' to the nearest tenth of an integer."

$$\text{Step 2) } \frac{q}{\sin Q} = \frac{r}{\sin R}$$

$$\frac{11}{\sin 74^\circ} = \frac{r}{\sin 63^\circ}$$

$$r \times \sin 74^\circ = 11 \times \sin 63^\circ$$

$$r \times 0.9613 = 11 \times 0.8910$$

$$r = \frac{11 \times 0.8910}{0.9613}$$

$$r = 10.196$$

So, the answer is 10.196



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Explanation#3

Step 1) We should know what we have to be find out.

"Find the length of 'g'."

$$\text{Step 2) } \frac{e}{\sin E} = \frac{g}{\sin G}$$

$$\frac{8}{\sin 13} = \frac{g}{\sin 20}$$

$$g \times \sin 13 = 8 \times \sin 20$$

$$g \times 0.225 = 8 \times 0.342$$

$$g = \frac{8 \times 0.342}{0.225}$$

$$g = 12.16$$

So, the answer is 12.16

