

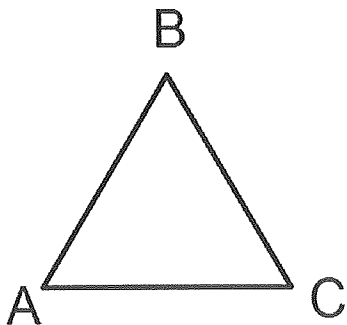
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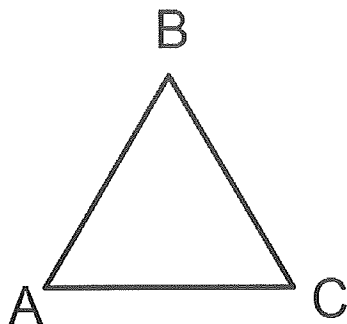
## Law of Sines ID Practice

Directions: Find the missing variable. Round to the nearest tenth if needed.

1. If  $m\angle A = 35$ ,  $m\angle B = 48$ , and  $b = 28$ , find  $a$ .



2. If  $a = 17$ ,  $b = 8$ , and  $m\angle A = 73$ , find  $m\angle B$ .



3. In a scalene triangle, one side is 12 feet and another side is 20 feet. The angle opposite 20 feet is 83 degrees. Find the measure of the angle opposite the side that is 12 feet.

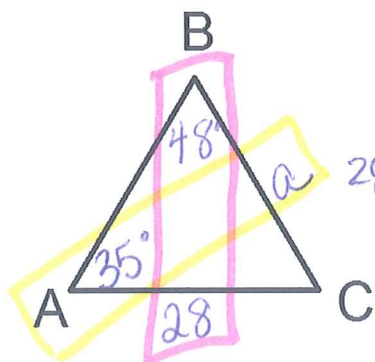
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## Law of Sines ID Practice

Directions: Find the missing variable. Round to the nearest tenth if needed.

1. If  $m\angle A = 35$ ,  $m\angle B = 48$ , and  $b = 28$ , find  $a$ .

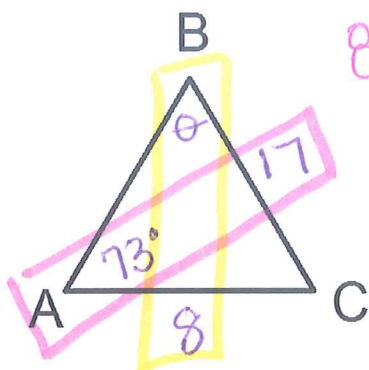


$$\frac{\sin(35)}{a} = \frac{\sin(48)}{28}$$

$$\frac{28 \cdot \sin(35)}{\sin(48)} = \frac{a \cdot \sin(48)}{\sin(48)}$$

$a \approx 21.6$

2. If  $a = 17$ ,  $b = 8$ , and  $m\angle A = 73$ , find  $m\angle B$ .



~~$$\frac{\sin B}{8} = \frac{\sin(73)}{17} \cdot 8$$~~

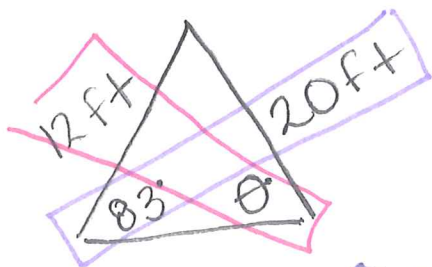
$$\sin B = \frac{8 \cdot \sin(73)}{17}$$

$$\angle B = \sin^{-1}\left(\frac{8 \cdot \sin(73)}{17}\right)$$

$\angle B \approx 26.75^\circ$

26.8 or 26.7  
is fine

3. In a scalene triangle, one side is 12 feet and another side is 20 feet. The angle opposite 20 feet is 83 degrees. Find the measure of the angle opposite the side that is 12 feet.



$$\frac{\sin \theta}{12} = \frac{\sin(83)}{20}$$

$$\sin \theta = \frac{12 \cdot \sin(83)}{20}$$

$$\theta = \sin^{-1}\left(\frac{12 \cdot \sin(83)}{20}\right)$$

$\theta \approx 36.55^\circ$

36.5 or  
36.6 is fine.