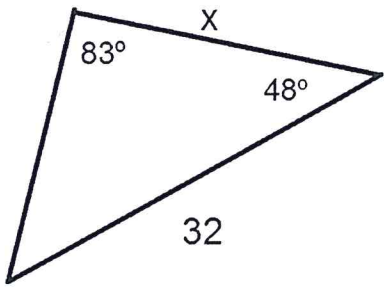
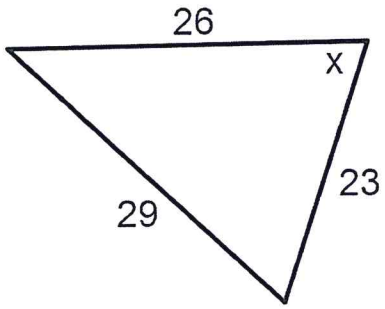
Bellwork Hon Alg 2 Wednesday, June 7, 2017

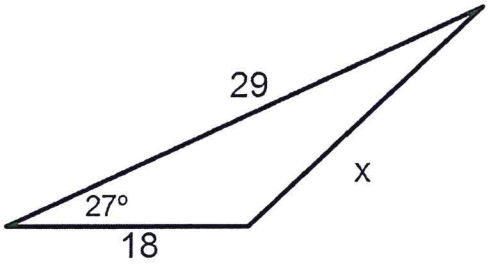
1. Find the value of x to the nearest tenth.



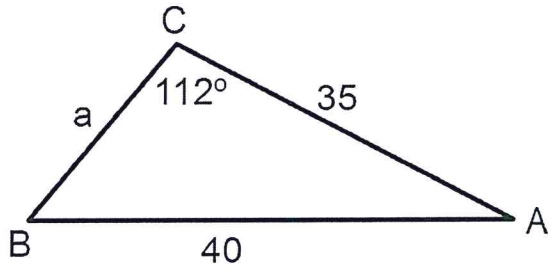
2. Find the value of x to the nearest tenth.



3. Find the value of x to the nearest tenth.



4. Find all the missing sides and angles.



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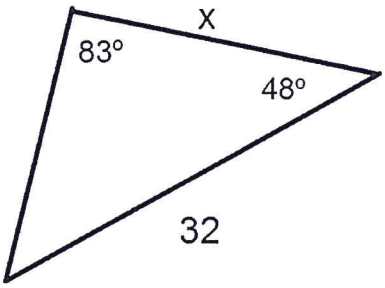

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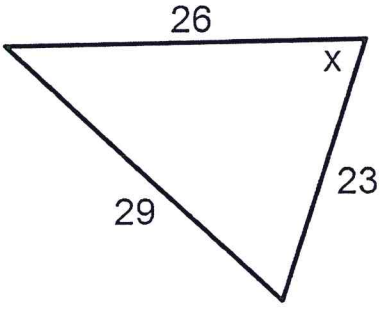

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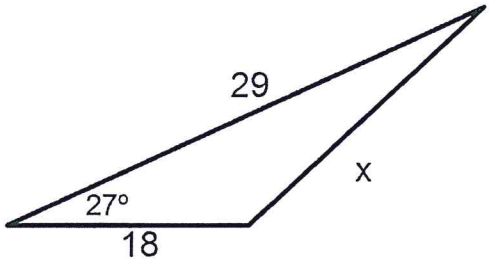

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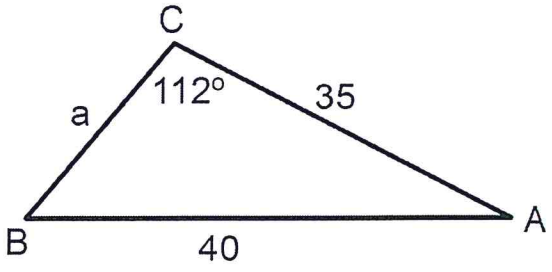

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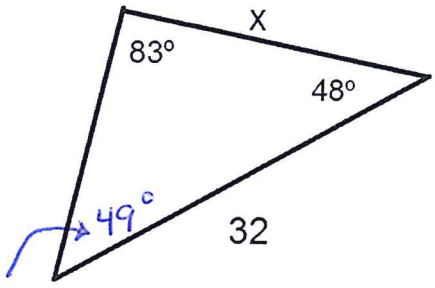
Answers

1. Find the value of x to the nearest tenth.

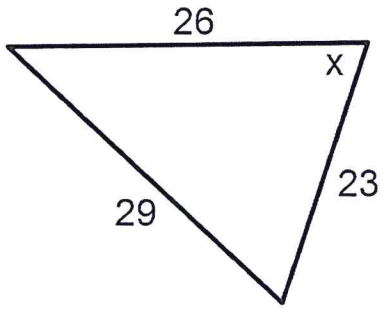


180 - 83 - 48

$\frac{\sin 83^\circ}{32} = \frac{\sin 49^\circ}{x}$

$x = 24.3$

2. Find the value of x to the nearest tenth.



$29^2 = 26^2 + 23^2 - 2(26)(23)\cos x$

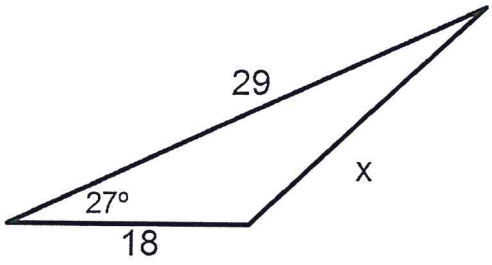
$-364 = -1196 \cos x$

$\cos x = \frac{-364}{-1196}$

$m\angle x = \cos^{-1}\left(\frac{-364}{-1196}\right)$

$m\angle x = 72.3^\circ$

3. Find the value of x to the nearest tenth.

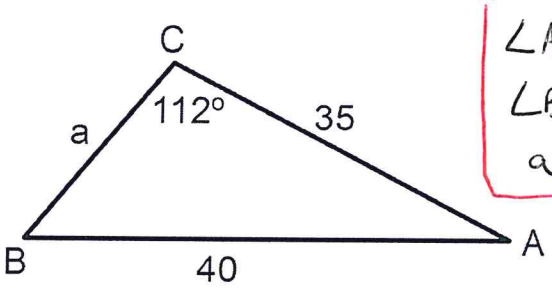


$x^2 = 18^2 + 29^2 - 2(18)(29)\cos 27^\circ$

$x^2 = 234.7891887$

$x = 15.3$

4. Find all the missing sides and angles.



$\angle A = 13.8^\circ$
$\angle B = 54.2^\circ$
$a = 10.3$

1st use Law of Sines to find $\angle B$

$\frac{\sin 112^\circ}{40} = \frac{\sin B}{35}$ $\sin B = 0.81128$

$\angle B = 54.2^\circ$

2nd Find $\angle A$

$180^\circ - 112^\circ - 54.2^\circ$

$\angle A = 13.8^\circ$

3rd use Law of Sines or Cosines to find side a

$\frac{\sin 112^\circ}{40} = \frac{\sin 13.8^\circ}{a}$ $a = 10.3$