Solve each triangle. Round your answers to the nearest tenth.

13) $a = 30$ cm, $c = 23$ cm, $b = 10$ cm
Find $m\angle A$

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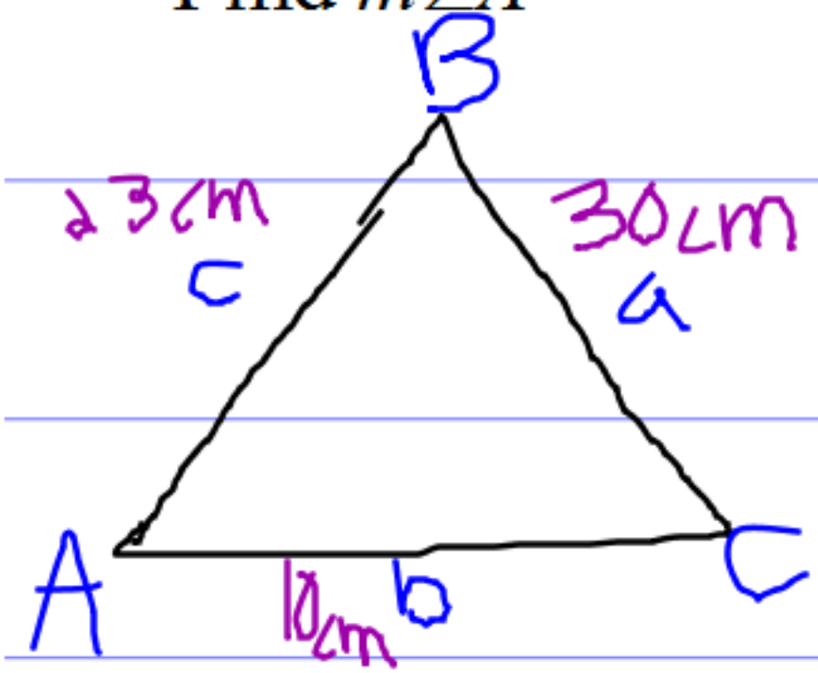


$\angle A =$

$\angle B = 16^\circ$

$\angle C =$

$a = 30$ cm

$b = 10$ cm

$c = 23$ cm

$$\cos B = \frac{a^2 + c^2 - b^2}{2ac}$$

$$= \frac{30^2 + 23^2 - 10^2}{2(30)(23)}$$

$$= \frac{1329}{1380}$$

$$\cos B^{-1} = 0.9630^{-1} \quad \angle B = 16^\circ$$

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$$\cos A = \frac{10^2 + 23^2 - 30^2}{2(10)(23)}$$

$$\cos A \approx \frac{-271}{460}$$

$$\cos A \approx -0.5891$$

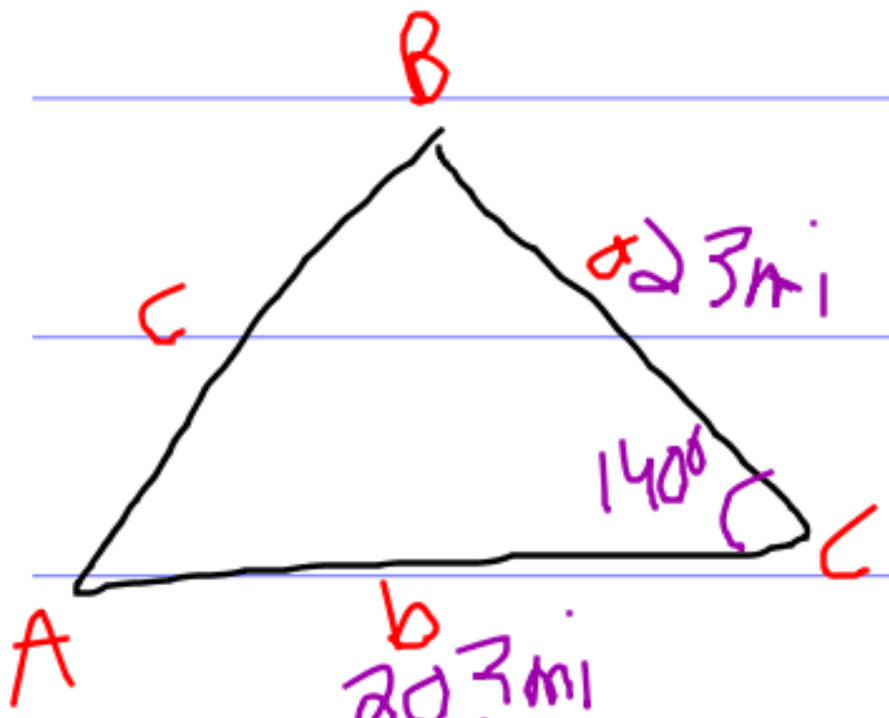
$$\angle A \approx 126^\circ$$

$$\angle C = 180 - 16 - 126$$

$$= 38^\circ$$

Solve each triangle. Round your answers to the nearest tenth.

15) $a = 23$ mi, $m\angle C = 140.2°$, $b = 20.3$ mi
Find $m\angle A$



$\angle A =$

$\angle B =$

$\angle C = 140°$

$a = 23$ mi

$b = 20.3$ mi

$c \approx 40.7$ mi

$c^2 = a^2 + b^2 - [2ab\cos C]$

$c^2 = 23^2 + 20.3^2 - [2(23)(20.3)(\cos 140$

$c^2 = 941.09 - (-715.3423)$

$c^2 = 1656.4423$

$c \approx 40.7$ in

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$\angle A = 21^\circ$

#17, 19, 21 or 22

$\angle B = 180 - \ldots$