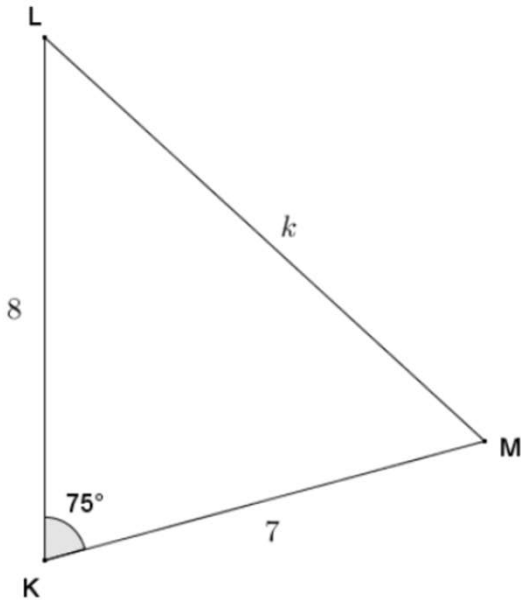


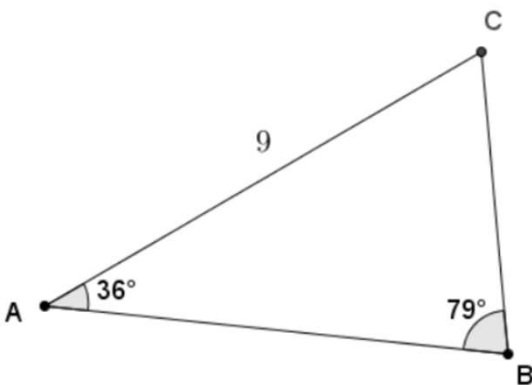
Trigonometry Worksheets

Law of Sines and Cosines

Given triangle MLK, $KL=8$, $KM=7$, and $m\angle K=75^\circ$, find the length of the unknown side to the nearest tenth



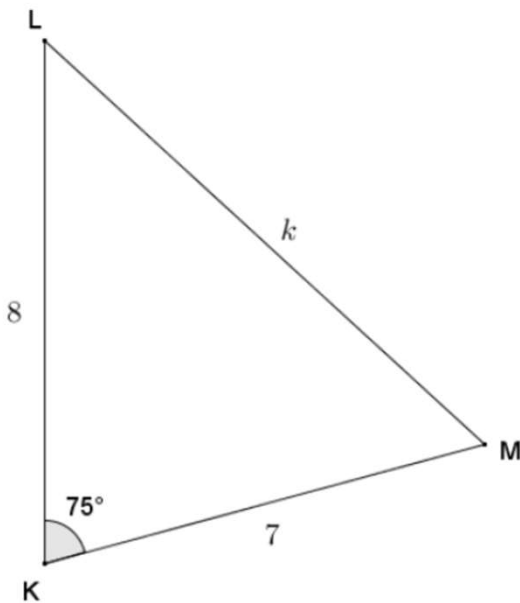
Given triangle ABC, $m\angle A=36^\circ$, $m\angle B=79^\circ$, and $AC=9$, find the lengths of the unknown sides to the nearest tenth.



Trigonometry Worksheets

Law of Sines and Cosines

Given triangle MLK, $KL=8$, $KM=7$, and $m\angle K=75^\circ$, find the length of the unknown side to the nearest tenth



$$k^2 = 8^2 + 7^2 - 2(8)(7)(\cos 75)$$

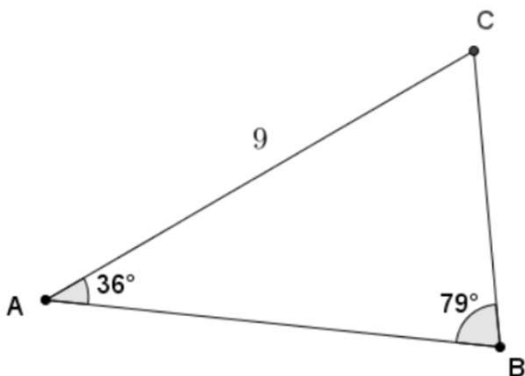
$$k^2 = 64 + 49 - 112(\cos 75)$$

$$k^2 = 113 - 112(\cos 75)$$

$$k = \sqrt{113 - 112(\cos 75)}$$

$$k \approx 9.2$$

Given triangle ABC, $m\angle A=36^\circ$, $m\angle B=79^\circ$, and $AC=9$, find the lengths of the unknown sides to the nearest tenth.



By the angle sum of a triangle, $m\angle C = 65^\circ$.

Using the law of sines:

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

$$\frac{\sin 36}{a} = \frac{\sin 79}{9} = \frac{\sin 65}{c}$$

$$a = \frac{9 \sin 36}{\sin 79}$$

$$a \approx 5.4$$

$$c = \frac{9 \sin 65}{\sin 79}$$

$$c \approx 8.3$$

$AB \approx 8.3$ and $BC \approx 5.4$.

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