

PhyzJob: Geometry LIVES!
WAVE OPTICS MATH ESSENTIALS



I. Consider a right triangle such as the one shown to the right. Given the length of the legs x and y , determine the measure of the angle θ . Use the correct number of significant figures in your final answer.

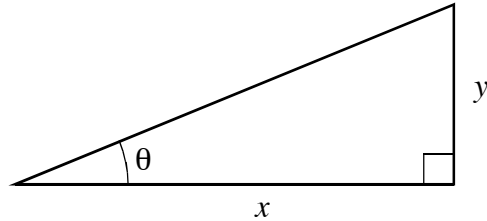
Ex. $x = 12$ m and $y = 8.0$ m.

$$\tan\theta = y/x$$

$$\theta = \text{Tan}^{-1}(y/x)$$

$$\theta = \text{Tan}^{-1}(8.0 \text{ m} / 12 \text{ m})$$

$$\theta = 34^\circ$$



1. $x = 120$ cm and $y = 42$ cm.

Write the complete solution.

2. $x = 50.0$ cm and $y = 87.3$ cm.

Write the complete solution.

3. $x = 24.6$ cm and $y = 52.3$ cm.

Write the calculated answer.

4. $x = 13.4$ cm and $y = 6.7$ cm.

Write the calculated answer.

II. Consider a right triangle such as the one shown above. Given the length of the leg x and the measure of the angle θ , determine the length of the leg y . Use the correct number of significant figures in your final answer.

Ex. $x = 43$ cm and $\theta = 28^\circ$.

$$\tan\theta = y/x$$

$$y = x \tan\theta$$

$$y = 43 \text{ cm} \cdot \tan 28^\circ$$

$$y = 23 \text{ cm}$$

5. $x = 102$ cm and $\theta = 22^\circ$.

Write the complete solution.

6. $x = 25$ cm and $\theta = 57^\circ$.

Write the complete solution.

7. $x = 50.0$ cm and $\theta = 33^\circ$.

Write the calculated answer.

8. $x = 12$ cm and $\theta = 45^\circ$.

Write the calculated answer.