

Let  $\angle A$  be an acute angle in a right triangle. Approximate the measure of  $\angle A$  to the nearest tenth of a degree.

1.  $\sin A = 0.36$

$A = \sin^{-1}(0.36) \approx 21.1^\circ$

2.  $\tan A = 0.8$

$A = \tan^{-1}(0.8) \approx 38.7^\circ$

3.  $\cos A = 0.35$

$A = \cos^{-1}(0.35) \approx 69.5^\circ$

4.  $\tan A = 0.42$

$A = \tan^{-1}(0.42) \approx 22.8^\circ$

5.  $\cos A = 0.11$

$A = \cos^{-1}(0.11) \approx 83.7^\circ$

6.  $\sin A = 0.94$

$A = \sin^{-1}(0.94) \approx 70.1^\circ$

Use the diagram to find the indicated measurement. Round your answer to the nearest tenth.

$15^2 + 7^2 = MN^2$

5.  $MN \approx 16.6$

6.  $m\angle M \approx 65.0^\circ$

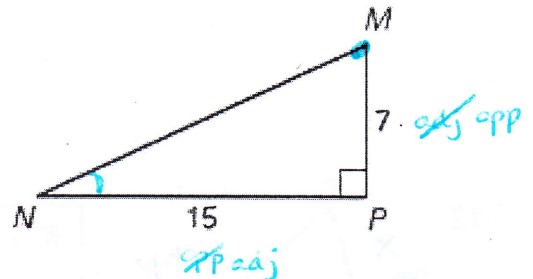
$\tan M = \frac{15}{7}$

$M = \tan^{-1}\left(\frac{15}{7}\right) \approx 64.983^\circ$

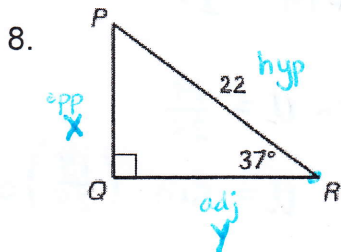
7.  $m\angle N \approx 25.0^\circ$

$\tan N = \frac{7}{15}$

$N = \tan^{-1}\left(\frac{7}{15}\right)$



Solve each right triangle. Round decimal answers to the nearest tenth.



$PQ = 13.2$   
 $QR = 17.6$   
 $\angle P = 53^\circ$

$\sin 37^\circ = \frac{x}{22}$

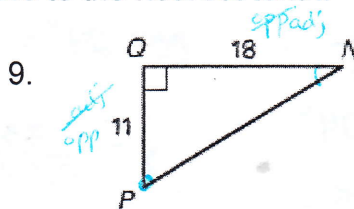
$x = 22 \cdot \sin 37^\circ$

$x = 13.2399$

$\cos 37^\circ = \frac{y}{22}$

$y = 22 \cdot \cos 37^\circ$

$y = 17.56998$



$PN = 21.1$   
 $\angle N = 31.4$   
 $\angle P = 58.6^\circ$

$11^2 + 18^2 = PN^2$   
 $\sqrt{445} = \sqrt{PN^2}$   
 $PN = 21.1$

$\tan P = \frac{18}{11}$

$P = \tan^{-1}\left(\frac{18}{11}\right)$

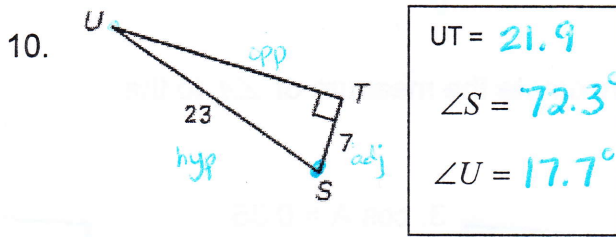
$P = 58.57043$

$\tan N = \frac{11}{18}$

$N = \tan^{-1}\left(\frac{11}{18}\right)$

$N = 31.4296$

Solve each right triangle. Round decimal answers to the nearest tenth.



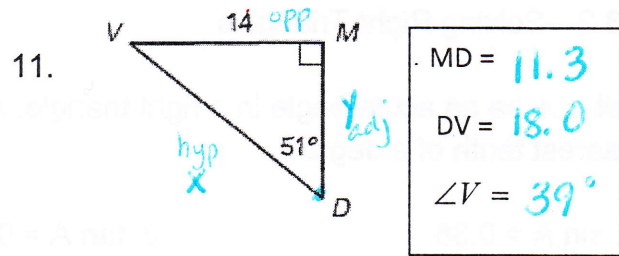
$$UT^2 + 7^2 = 23^2$$

$$\cos S = \frac{7}{23}$$

$$S = \cos^{-1}\left(\frac{7}{23}\right)$$

$$\sin U = \frac{7}{23}$$

$$U = \sin^{-1}\left(\frac{7}{23}\right)$$



$$\sin 51^\circ = \frac{14}{x}$$

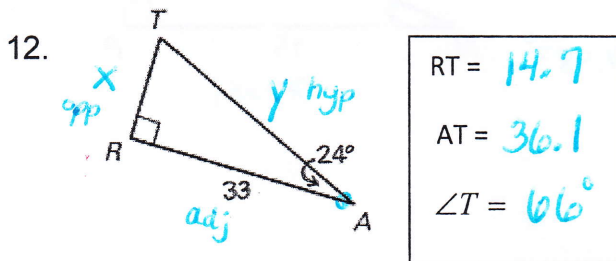
$$x = \frac{14}{\sin 51^\circ}$$

$$x = 18.0$$

$$\tan 51^\circ = \frac{14}{y}$$

$$y = \frac{14}{\tan 51^\circ}$$

$$y = 11.3$$



$$\tan 24^\circ = \frac{x}{33}$$

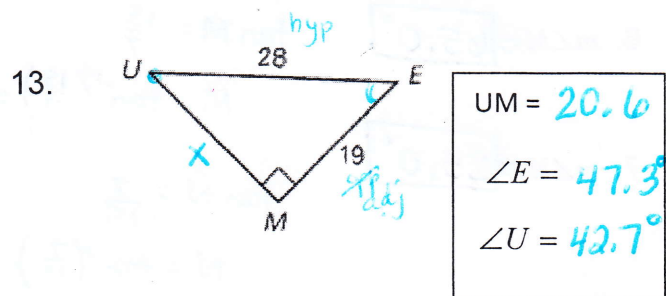
$$x = 33 \cdot \tan 24^\circ$$

$$x = 14.6925$$

$$\cos 24^\circ = \frac{33}{y}$$

$$y = \frac{33}{\cos 24^\circ}$$

$$y = 36.122997$$



$$x^2 + 19^2 = 28^2$$

$$\sin U = \frac{19}{28}$$

$$U = \sin^{-1}\left(\frac{19}{28}\right) \approx 42.7^\circ$$

$$\cos E = \frac{19}{28}$$

$$E = \cos^{-1}\left(\frac{19}{28}\right) \approx 47.3^\circ$$