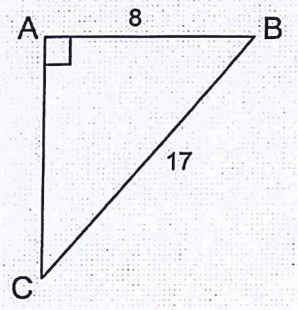
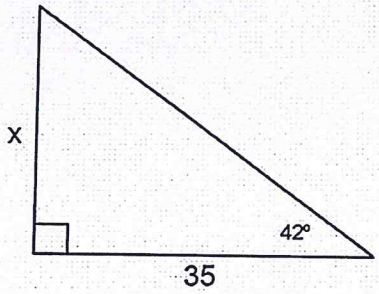
Practice #2 Algebra 2 Tangent Ratio Sec 7-1 3-17-20

1. Use $\triangle ABC$ to find each tangent ratio as a fraction: a) Tan B = b) Tan C =

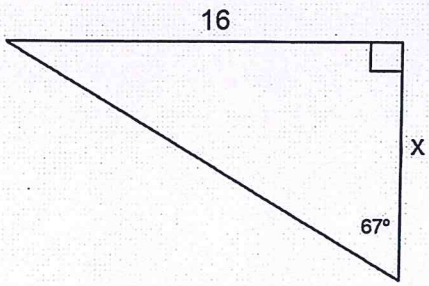


2. Find the value of x in each triangle to the nearest hundredth. Make sure your calculator is in DEGREE MODE.

a) $x =$

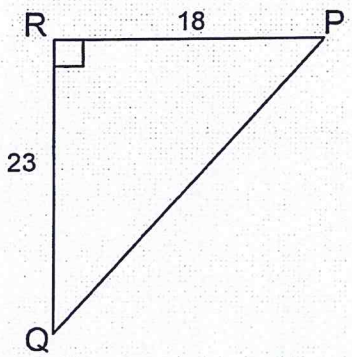


b) $x =$



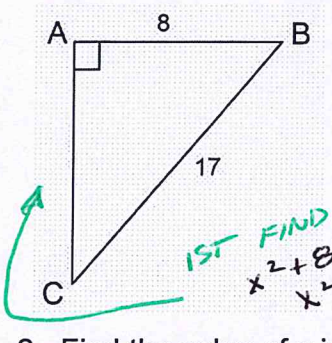
3. A long board is going to be used to make a ramp from the parking lot up to the door of a business. The door is 2 feet above the level of the parking lot. The ramp is going to make a 5° angle with the parking lot. How far away from the door will the end of the ramp be?

4. Find the measure of each angle in this triangle to the nearest hundredth: $\angle P =$ $\angle Q =$

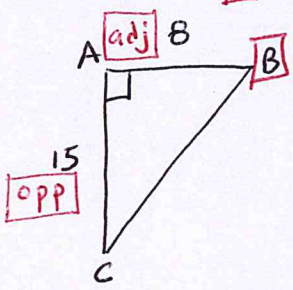


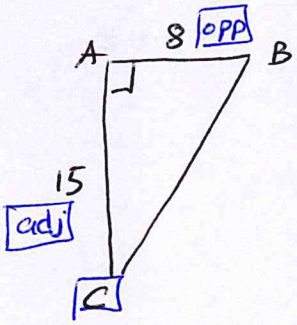
Practice #2 Algebra 2 Tangent Ratio Sec 7-1 3-17-20 Answers

1. Use $\triangle ABC$ to find each tangent ratio as a fraction: a) $\tan B = \frac{15}{8}$ b) $\tan C = \frac{8}{15}$



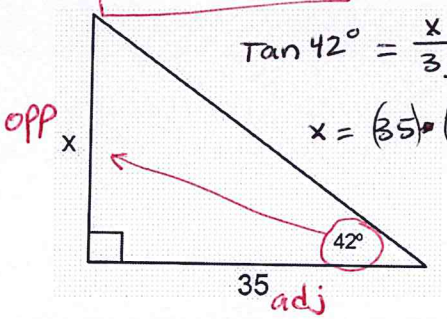
1ST FIND missing leg:
$x^2+8^2=17^2$
$x^2=17^2-8^2$
$x=\sqrt{17^2-8^2}=15$





2. Find the value of x in each triangle to the nearest hundredth. Make sure your calculator is in DEGREE MODE.

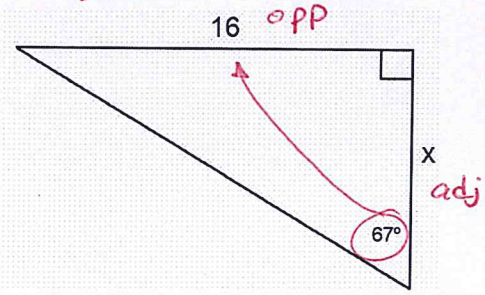
a) $x = 31.51$



$\tan 42° = \frac{x}{35}$

$x = (35)\cdot(\tan 42°)$

b) $x = 6.79$



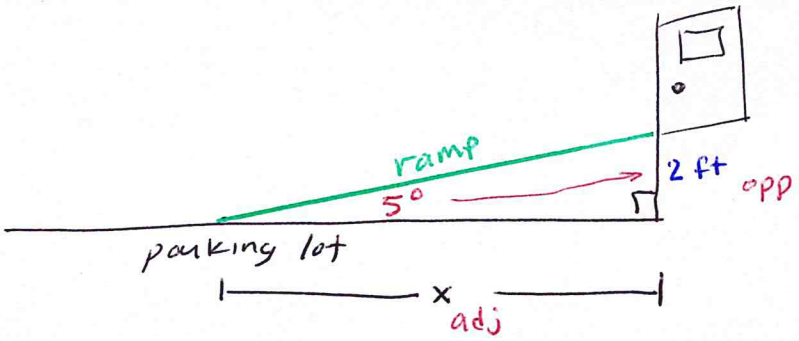
$\tan 67° = \frac{16}{x}$

$\frac{\tan 67°}{1} = \frac{16}{x}$

cross multiply

$\frac{(16)\cdot(1)}{\tan 67°} = x$

3. A long board is going to be used to make a ramp from the parking lot up to the door of a business. The door is 2 feet above the level of the parking lot. The ramp is going to make a 5° angle with the parking lot. How far away from the door will the end of the ramp be?

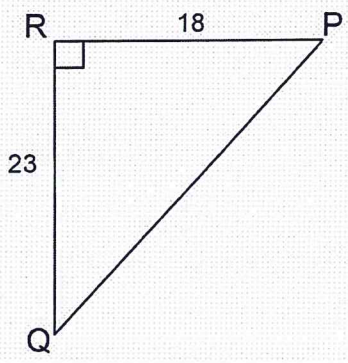


$\frac{\tan 5°}{1} = \frac{2}{x}$

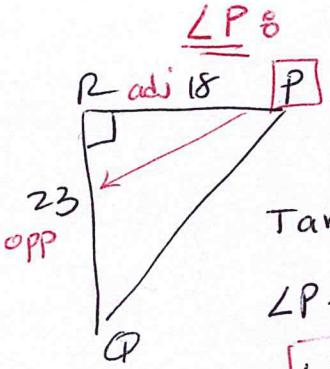
$\frac{(2)\cdot(1)}{\tan 5°} = x$

$x = 22.86$ ft

4. Find the measure of each angle in this triangle to the nearest hundredth: $\angle P = 51.95°$ $\angle Q = 38.05°$



∠P:

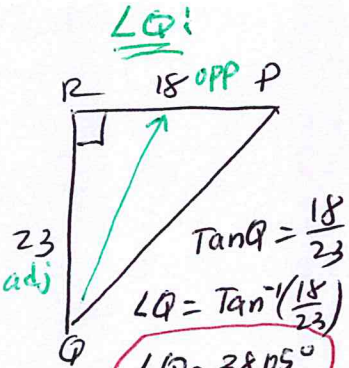


$\tan P = \frac{23}{18}$

$\angle P = \tan^{-1}\left(\frac{23}{18}\right)$

$\angle P = 51.95°$

∠Q:



$\tan Q = \frac{18}{23}$

$\angle Q = \tan^{-1}\left(\frac{18}{23}\right)$

$\angle Q = 38.05°$