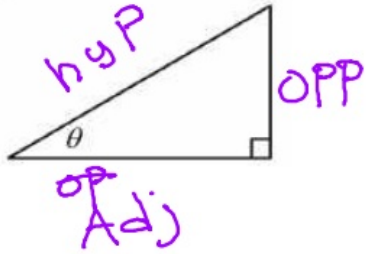


Identify the side **opposite** to θ (theta), the side **adjacent** to θ , and the **hypotenuse** of each triangle.

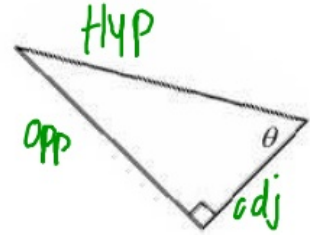
1.



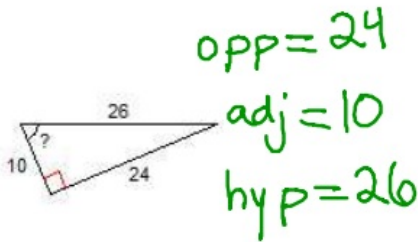
2.



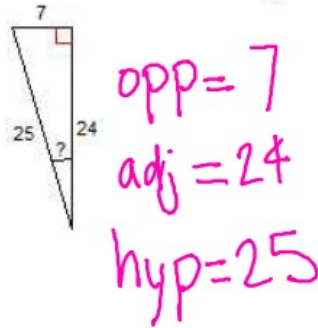
3.



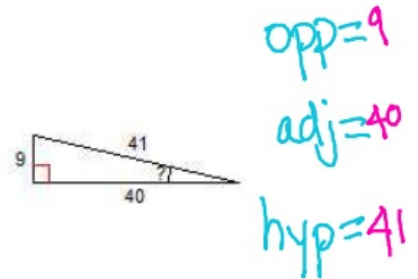
4.



5.



6.



Write the trigonometric ratios

Memorize

$$\sin \theta = \frac{\text{opp}}{\text{hyp}}$$

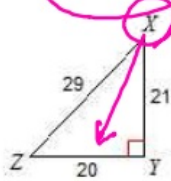
$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

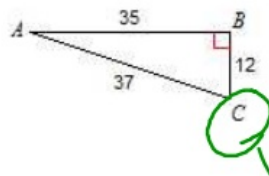
Some
Old
hippie
Caught
another
hippie
tripping
on
acid

Find the value of each trigonometric ratio.

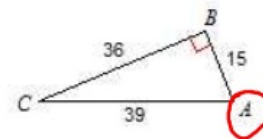
7. $\sin X = \frac{20}{29}$ *opp/hyp*



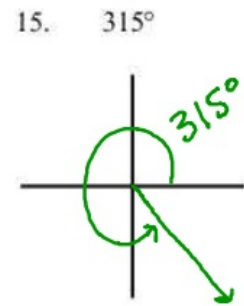
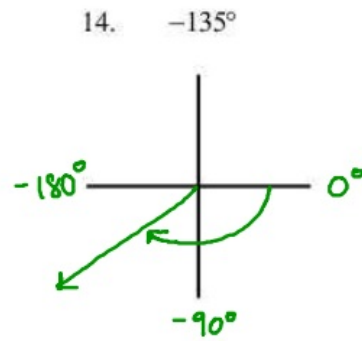
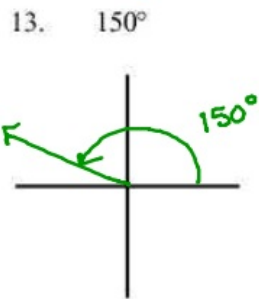
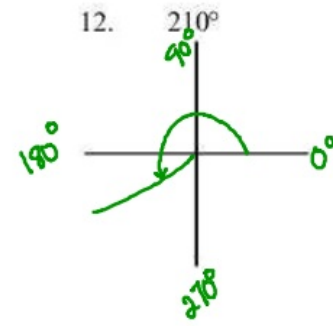
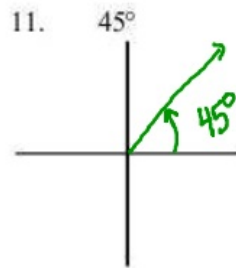
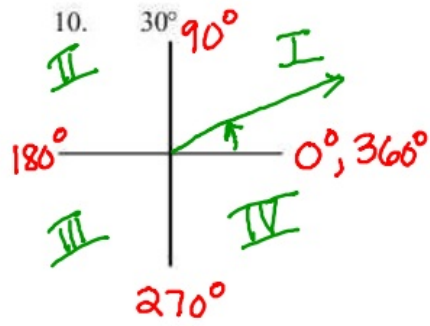
8. $\cos C = \frac{12}{37}$ *adj/hyp*



9. $\tan A = \frac{36}{15}$ *opp/adj*



Draw each angle.



Simplifying Radicals

$$\begin{aligned} \textcircled{1} \quad \sqrt{16} \\ = \sqrt{4 \cdot 4} \\ = 4 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad \sqrt{12} \\ = \sqrt{4 \cdot 3} \\ = \sqrt{2 \cdot 2 \cdot 3} \\ = 2\sqrt{3} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad \sqrt{50} \\ = \sqrt{5 \cdot 10} \\ = \sqrt{5 \cdot 5 \cdot 2} \\ = 5\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad \sqrt{8} \\ = \sqrt{2 \cdot 4} \\ = \sqrt{2 \cdot 2 \cdot 2} \\ = 2\sqrt{2} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad 6\sqrt{63} \\ = 6\sqrt{7 \cdot 3 \cdot 3} \\ = 6 \cdot 3\sqrt{7} \\ = 18\sqrt{7} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad 3\sqrt{72} \\ = 3\sqrt{9 \cdot 8} \\ = 3\sqrt{3 \cdot 3 \cdot 2 \cdot 2 \cdot 2} \\ = 3 \cdot 3 \cdot 2\sqrt{2} \\ = 18\sqrt{2} \end{aligned}$$

$$\begin{aligned} 3\sqrt{12 \cdot 6} \\ 3\sqrt{2 \cdot 6 \cdot 6} \\ 3 \cdot 6\sqrt{2} \\ 18\sqrt{2} \end{aligned}$$

Rationalize the denominator

$$\textcircled{7} \quad \frac{2}{\sqrt{3}} \left(\frac{\sqrt{3}}{\sqrt{3}} \right) = \frac{2\sqrt{3}}{3}$$

$$\textcircled{8} \quad \frac{7}{\sqrt{5}} \left(\frac{\sqrt{5}}{\sqrt{5}} \right) = \frac{7\sqrt{5}}{5}$$

$$\begin{aligned} \textcircled{9} \quad \frac{\sqrt{4}}{\sqrt{5}} \\ = \frac{2}{\sqrt{5}} \left(\frac{\sqrt{5}}{\sqrt{5}} \right) = \frac{2\sqrt{5}}{5} \end{aligned}$$