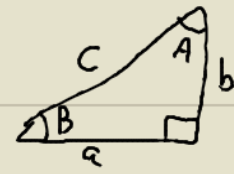
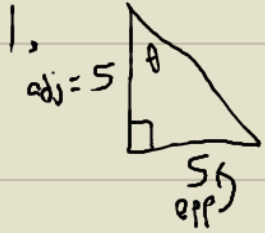


$$\begin{aligned} \sin A &= \frac{\text{opp}}{\text{hyp}} \\ \cos A &= \frac{\text{adj}}{\text{hyp}} \\ \tan A &= \frac{\text{opp}}{\text{adj}} \end{aligned}$$

$$\begin{aligned} \csc A &= \frac{\text{hyp}}{\text{opp}} \\ \sec A &= \frac{\text{hyp}}{\text{adj}} \\ \cot A &= \frac{\text{adj}}{\text{opp}} \end{aligned}$$



PYTHAGOREAN THEOREM  
 $a^2 + b^2 = c^2$



$$\sin A = \frac{\text{opp}}{\text{hyp}} = \frac{5}{5\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{1 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} = \left( \frac{\sqrt{2}}{2} \right)$$

$$\cos A = \frac{\text{adj}}{\text{hyp}} = \frac{5}{5\sqrt{2}} = \left( \frac{\sqrt{2}}{2} \right)$$

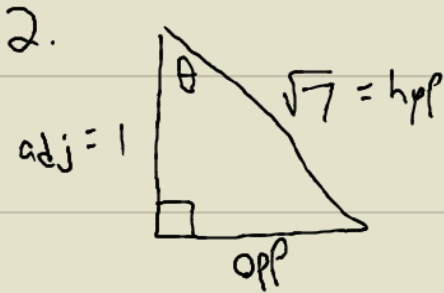
$$\tan A = \frac{\text{opp}}{\text{adj}} = \frac{5}{5} = 1$$

$$\csc A = \frac{\sqrt{2}}{1} = \left( \sqrt{2} \right)$$

$$\sec A = \left( \sqrt{2} \right)$$

$$\cot A = 1$$

$$\begin{aligned} \text{hyp}^2 &= \text{opp}^2 + \text{adj}^2 \\ \text{hyp}^2 &= 5^2 + 5^2 \\ \text{hyp}^2 &= 25 + 25 \\ \text{hyp}^2 &= 50 \\ \text{hyp} &= \sqrt{50} \\ \text{hyp} &= \sqrt{5 \cdot 5 \cdot 2} \\ \text{hyp} &= 5\sqrt{2} \end{aligned}$$



$$\sin A = \frac{\text{opp}}{\text{hyp}} = \frac{\sqrt{6}}{\sqrt{7}} = \frac{\sqrt{6}}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \left( \frac{\sqrt{42}}{7} \right)$$

$$\cos A = \frac{\text{adj}}{\text{hyp}} = \frac{1}{\sqrt{7}} = \frac{1 \cdot \sqrt{7}}{\sqrt{7} \cdot \sqrt{7}} = \left( \frac{\sqrt{7}}{7} \right)$$

$$\tan A = \frac{\text{opp}}{\text{adj}} = \frac{\sqrt{6}}{1} = \left( \sqrt{6} \right)$$

$$\csc A = \frac{\sqrt{7}}{\sqrt{6}} = \frac{\sqrt{7} \cdot \sqrt{6}}{\sqrt{6} \cdot \sqrt{6}} = \left( \frac{\sqrt{42}}{6} \right)$$

$$\sec A = \frac{\sqrt{7}}{1} = \left( \sqrt{7} \right)$$

$$\cot A = \frac{1}{\sqrt{6}} = \frac{1 \cdot \sqrt{6}}{\sqrt{6} \cdot \sqrt{6}} = \left( \frac{\sqrt{6}}{6} \right)$$

$$\begin{aligned} \text{opp}^2 + \text{adj}^2 &= \text{hyp}^2 \\ \text{opp}^2 + 1^2 &= (\sqrt{7})^2 \\ \text{opp}^2 + 1 &= 7 \\ \text{opp}^2 &= 7 - 1 \\ \text{opp}^2 &= 6 \\ \text{opp} &= \sqrt{6} \end{aligned}$$