

Given that $\text{Csc}\theta = 7 = \frac{7}{1}$

Evaluate the other five trig functions. Rationalize all denominators as needed and simplify fractions.

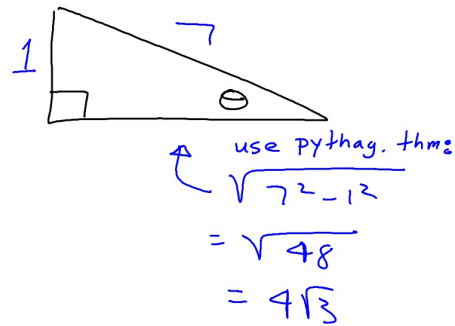
$$\text{Sin}\theta = \frac{1}{7} \quad \text{opp leg} / \text{hypot}$$

$$\text{Cos}\theta = \frac{4\sqrt{3}}{7}$$

$$\text{Sec}\theta = \frac{7}{4\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{7\sqrt{3}}{12}$$

$$\text{Tan}\theta = \frac{1}{4\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{12}$$

$$\text{Cot}\theta = \frac{4\sqrt{3}}{1} = 4\sqrt{3}$$



Given that $\text{Cot}\theta = -\frac{15}{8}$ and $\text{Sec}\theta > 0$

Evaluate the other five trig functions. Rationalize all denominators as needed and simplify fractions.

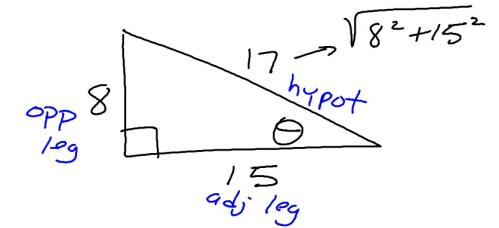
$$\text{Sin}\theta = -\frac{8}{17}$$

$$\text{Csc}\theta = -\frac{17}{8}$$

$$\text{Tan}\theta = -\frac{8}{15} = \frac{\text{opp leg}}{\text{adj leg}}$$

$$\text{Cos}\theta = \frac{15}{17}$$

$$\text{Sec}\theta = \frac{17}{15}$$

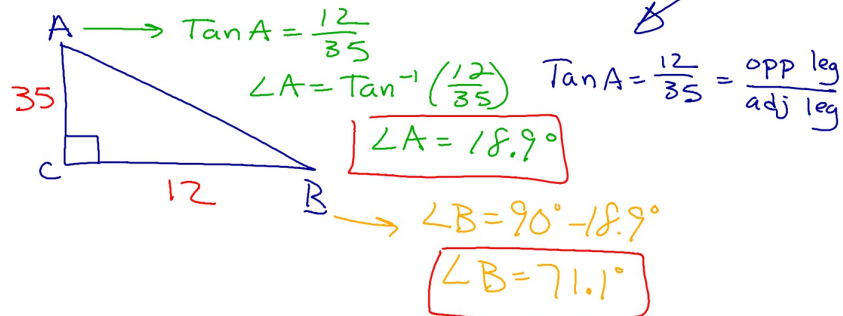


Since Cot and Tan are negative θ must be in quadrants II or IV. Since Sec and, therefore, Cos are positive θ must be in quadrants I or IV. The only quadrant where both of these is true is Quadrant IV. Thus, θ must be in Quadrant IV where x is positive and y is negative.

This means both Sin and Csc must be negative.

In $\triangle ABC$, $\angle C$ is the right angle and $\text{Cot}A = \frac{35}{12}$

Find the measures of angles A and B to the nearest tenth of a degree.



$\text{Csc}\theta = 1.35$

Find θ to the nearest tenth of a degree.

$$\text{Sin}\theta = \frac{1}{1.35}$$

$$\theta = \text{Sin}^{-1}\left(\frac{1}{1.35}\right) = 47.8^\circ$$

You can now finish Hwk #23 Sec 13-8

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AND

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Due Tomorrow