

Name _____

Date _____ Hour _____

Find the missing pieces. Show your work!!

1) $\sin x = \frac{3}{5}$, in Quadrant II

$$\cos x = \frac{-4}{5}$$

$$\tan x = \frac{-3}{4}$$

2) $\sin y = \frac{-8}{17}$

$$\cos y = \frac{-15}{17}$$
, in Quadrant III

$$\tan y = \frac{8}{15}$$

$$\sin^2 x + \cos^2 x = 1$$

$$\frac{9}{25} + \cos^2 x = 1$$

$$\cos^2 x = 1 - \frac{9 \left(\frac{3}{5} \right)^2}{25} \quad \frac{5^2}{5^2} \quad 25 - 9$$

$$\cos^2 x = \frac{25 - 9}{25} = \frac{16}{25}$$

$$\cos^2 x = \frac{16}{25}$$

$$\sqrt{\cos^2 x} = \sqrt{\frac{16}{25}}$$

$$\cos x = \frac{-4}{5}$$
, because x is in Quad. II

$$\tan x = \frac{\sin x}{\cos x} = \frac{\frac{3}{5}}{\frac{-4}{5}} = \frac{3}{5} \div \frac{-4}{5} = \frac{3}{5} \cdot \frac{5}{-4} = \frac{-3}{4}$$

$$\sin^2 y + \cos^2 y = 1$$

$$\sin^2 y + \frac{225}{289} = 1$$

$$\sin^2 y = 1 - \frac{225}{289}$$

$$\sin^2 y = \frac{289}{289} - \frac{225}{289}$$

$$\sin^2 y = \frac{64}{289}$$

$$\sqrt{\sin^2 y} = \sqrt{\frac{64}{289}}$$

$$\sin y = \frac{-8}{17}$$
, because y is in Quad. III

$$\tan y = \frac{\sin y}{\cos y} = \frac{\frac{-8}{17}}{\frac{-15}{17}} = \frac{-8}{17} \div \frac{-15}{17} = \frac{-8}{17} \cdot \frac{17}{-15} = \frac{8}{15}$$