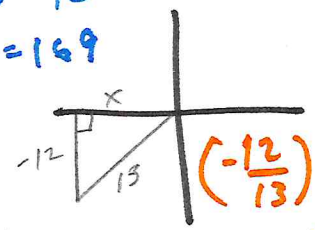
7. $\sin\theta = \frac{-12}{13}$ *and* $\tan\theta$ *is positive.*

$x^2 + (-12)^2 = 13^2$

$x^2 + 144 = 169$

$x^2 = 25$

$x = -5$



$\cos = \frac{-5}{13}$

$\tan = \frac{-12}{-5} = \frac{12}{5}$

$\left(\frac{-12}{13}\right)^2 + \left(\frac{-5}{13}\right)^2 = 1$

$\frac{144}{169} + \frac{25}{169} = 1$

$\frac{169}{169} = 1$ ✓

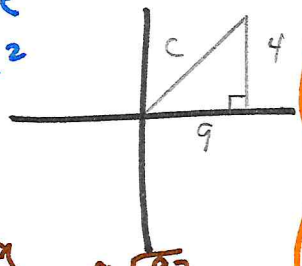
8. $\tan\theta = \frac{4}{9}$ *and* $\cos\theta$ *is positive.*

$4^2 + 9^2 = c^2$

$16 + 81 = c^2$

$97 = c^2$

$\sqrt{97} = c$



$\cos = \frac{9}{\sqrt{97}} = \frac{9\sqrt{97}}{97}$

$\sin = \frac{4}{\sqrt{97}} = \frac{4\sqrt{97}}{97}$

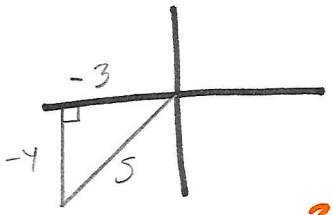
$\left(\frac{4\sqrt{97}}{97}\right)^2 + \left(\frac{9\sqrt{97}}{97}\right)^2 = 1$

$\left(\frac{16 \cdot 97}{97 \cdot 97}\right) + \frac{81 \cdot 97}{97 \cdot 97} = 1$

$\frac{16}{97} + \frac{81}{97} = 1$

$\frac{97}{97} = 1$ ✓

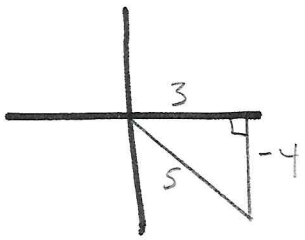
9. Given $\sin\theta = \frac{-4}{5}$, what are <u>all</u> possible values for $\cos\theta$ and $\tan\theta$?



$\cos = \frac{-3}{5}$

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

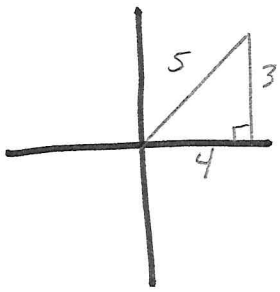
or



$\cos = \frac{3}{5}$

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

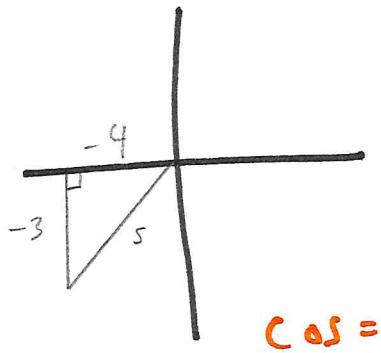
10. Given $\tan\theta = \frac{3}{4}$, what are <u>all</u> possible values for $\cos\theta$ and $\sin\theta$?



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

$\sin = \frac{3}{5}$

or



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

$\sin = \frac{-3}{5}$