VD Topic 2 part 2

Given a trigometric ratio of an angle, θ, and the sign (+, -) of the other trigonometric ratio, find

1. which would the terminal side of θ land

2. what are the other trigonometric ratios?

given trig ratio	sign of the 2nd trig ratio	Quadrant of the terminal side	other trig ratios
$\cos\theta = \frac{\sqrt{2}}{2}$	$\sin\theta < 0$	Q4	$\sin\theta = -\frac{\sqrt{2}}{2}$ $\tan\theta = -1$ $\cot\theta = -1$ $\sec\theta = \sqrt{2}$ $\csc\theta = -\sqrt{2}$
$\sec\theta = 7$	$\tan\theta > 0$	Q1	$\sin\theta = \frac{4\sqrt{3}}{7}$ $\cos\theta = \frac{1}{7}$ $\tan\theta = 4\sqrt{3}$ $\cot\theta = \frac{\sqrt{3}}{12}$ $\csc\theta = \frac{7\sqrt{3}}{12}$
$\sin\theta = \frac{1}{4}$	$\cot\theta < 0$	Q2	$\cos\theta = -\frac{\sqrt{15}}{4}$ $\tan\theta = -\frac{\sqrt{15}}{15}$ $\cot\theta = -\sqrt{15}$ $\sec\theta = -\frac{4\sqrt{15}}{15}$ $\csc\theta = 4$

$\tan\theta = 3$	$\csc\theta > 0$	Q1	$\sin\theta = \frac{3\sqrt{10}}{10}$ $\cos\theta = \frac{\sqrt{10}}{10}$ $\cot\theta = \frac{1}{3}$ $\sec\theta = \sqrt{10}$ $\csc\theta = \frac{\sqrt{10}}{3}$
$\sec\theta = 5$	$\sin\theta > 0$	Q1	$\sin\theta = \frac{2\sqrt{6}}{5}$ $\cos\theta = \frac{1}{5}$ $\tan\theta = 2\sqrt{6}$ $\cot\theta = \frac{\sqrt{6}}{12}$ $\csc\theta = \frac{5\sqrt{6}}{12}$
$\cos\theta = -\frac{1}{6}$	$\tan\theta < 0$	Q2	$\sin\theta = \frac{\sqrt{35}}{6}$ $\tan\theta = -\sqrt{35}$ $\cot\theta = -\frac{\sqrt{35}}{35}$ $\sec\theta = -6$ $\csc\theta = \frac{6\sqrt{35}}{35}$
$\sin\theta = \frac{2}{3}$	$\cot\theta > 0$	Q1	$\cos\theta = \frac{\sqrt{5}}{3}$ $\tan\theta = \frac{2\sqrt{5}}{5}$ $\cot\theta = \frac{\sqrt{5}}{2}$ $\sec\theta = \frac{3\sqrt{5}}{5}$ $\csc\theta = \frac{3}{2}$

$\cos\theta = \frac{3}{4}$	$\sin\theta < 0$	Q4	$\sin\theta = -\frac{\sqrt{7}}{4}$ $\tan\theta = -\frac{\sqrt{7}}{3}$ $\cot\theta = -\frac{3\sqrt{7}}{7}$ $\sec\theta = \frac{4}{3}$ $\csc\theta = -\frac{4\sqrt{7}}{7}$