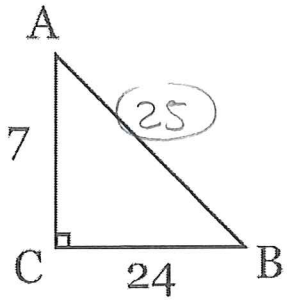
College Algebra Name: Key

5.2 Practice Period: _____ Date: _____

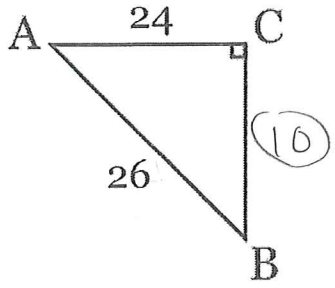
Find the six trig functions given the following right triangles.

1)



$\sin A = \frac{24}{25}$	$\csc A = \frac{25}{24}$
$\cos A = \frac{7}{25}$	$\sec A = \frac{25}{7}$
$\tan A = \frac{24}{7}$	$\cot A = \frac{7}{24}$

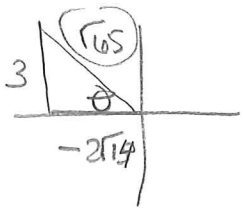
2)



$\frac{24}{10}$	$\sin B = \frac{12}{13}$	$\csc B = \frac{13}{12}$
$\frac{10}{24}$	$\cos B = \frac{5}{13}$	$\sec B = \frac{13}{5}$
$\frac{24}{10}$	$\tan B = \frac{12}{5}$	$\cot B = \frac{5}{12}$

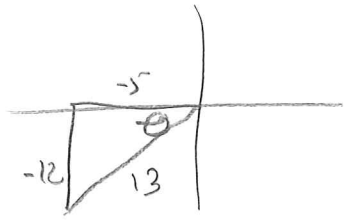
Find the six trig functions given an ordered pair.

3) $\left(-2\sqrt{14}, 3\right)$



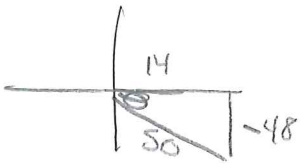
$\sin\theta = \frac{3}{\sqrt{65}}$	$\csc\theta = \frac{\sqrt{65}}{3}$
$\cos\theta = \frac{-2\sqrt{14}}{\sqrt{65}}$	$\sec\theta = \frac{-\sqrt{65}}{2\sqrt{14}}$
$\tan\theta = \frac{-3}{2\sqrt{14}}$	$\cot\theta = \frac{-2\sqrt{14}}{3}$

4) (-5, -12)



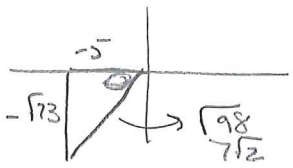
	$\sin\theta = \frac{-12}{13}$	$\csc\theta = \frac{-13}{12}$
	$\cos\theta = \frac{-5}{13}$	$\sec\theta = \frac{-13}{5}$
$\frac{-12}{-5}$	$\tan\theta = \frac{12}{5}$	$\cot\theta = \frac{5}{12}$

5) $(14,-48)$



$\frac{-48}{50}$	$\sin\theta = \frac{-24}{25}$	$\csc\theta = \frac{-25}{24}$
$\frac{14}{50}$	$\cos\theta = \frac{7}{25}$	$\sec\theta = \frac{25}{7}$
$\frac{-48}{14}$	$\tan\theta = \frac{-24}{7}$	$\cot\theta = \frac{-7}{24}$

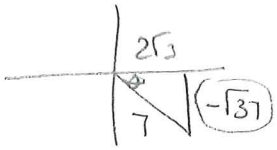
6) $\left(-5,-\sqrt{73}\right)$



$\frac{-\sqrt{73}}{7\sqrt{2}}$	$\sin\theta = \frac{-\sqrt{73}}{7\sqrt{2}}$	$\csc\theta = \frac{-7\sqrt{2}}{\sqrt{73}}$
	$\cos\theta = \frac{-5}{7\sqrt{2}}$	$\sec\theta = \frac{-7\sqrt{2}}{5}$
$\frac{-\sqrt{73}}{-5}$	$\tan\theta = \frac{\sqrt{73}}{5}$	$\cot\theta = \frac{5}{\sqrt{73}}$

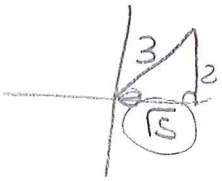
Find the six trig functions given the value of one function and the quadrant.

7) $\cos A = \frac{2\sqrt{3}}{7}$ $\quad \frac{3\pi}{2} < \theta < 2\pi$



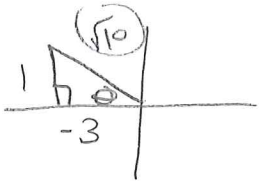
	$\sin A = \frac{-\sqrt{37}}{7}$	$\csc A = \frac{-7}{\sqrt{37}}$
	$\cos A = \frac{2\sqrt{3}}{7}$	$\sec A = \frac{7}{2\sqrt{3}}$
	$\tan A = \frac{-\sqrt{37}}{2\sqrt{3}}$	$\cot A = \frac{-2\sqrt{3}}{\sqrt{37}}$

8) $\sin B = \frac{2}{3}$ $\quad 0 < \theta < \frac{\pi}{2}$



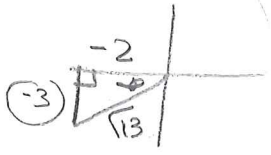
	$\sin B = \frac{2}{3}$	$\csc B = \frac{3}{2}$
	$\cos B = \frac{\sqrt{5}}{3}$	$\sec B = \frac{3}{\sqrt{5}}$
	$\tan B = \frac{2}{\sqrt{5}}$	$\cot B = \frac{\sqrt{5}}{2}$

9) $\tan A = -\frac{1}{3}$ $\quad 90^\circ < \theta < 180^\circ$



	$\sin A = \frac{1}{\sqrt{10}}$	$\csc A = \sqrt{10}$
	$\cos A = \frac{-3}{\sqrt{10}}$	$\sec A = \frac{-\sqrt{10}}{3}$
	$\tan A = \frac{-1}{3}$	$\cot A = -3$

10) $\sec B = -\frac{\sqrt{13}}{2}$ $\quad 180^\circ < \theta < 270^\circ$



	$\sin B = \frac{-3}{\sqrt{13}}$	$\csc B = \frac{-\sqrt{13}}{3}$
	$\cos B = \frac{-2}{\sqrt{13}}$	$\sec B = \frac{-\sqrt{13}}{2}$
$\frac{-3}{-2}$	$\tan B = \frac{3}{2}$	$\cot B = \frac{2}{3}$