

Name: _____

1. Solve the simultaneous equations $x - 2y = 1$ $x^2 + y^2 = 13$	$x = -3, y = -2$ or $x = \frac{17}{5}, y = \frac{6}{5}$
2. Find the set of values of x that satisfy $2x^2 - 5x - 7 \leq 0$	$-1 \leq x \leq \frac{7}{2}$ which translates to $\left\{x \in \mathbb{R} : -1 \leq x \leq \frac{7}{2}\right\}$ in set notation
3. Given that $\frac{dy}{dx} = 6x^2 + 2 - \sqrt{x}$ and that when $x = 1, y = 2$, find y in terms of x .	Integrate both sides and substitute initial conditions in and you will obtain $y = -\frac{2}{3}x^{\frac{3}{2}} + 2x^3 + 2x - \frac{4}{3}$
4. Solve the equation $3\cos x = 2\sin x$ for $0 < x < 360^\circ$	Divide both sides by 2 and $\cos(x)$ to obtain $\tan x = \frac{3}{2}$ This gives $x = 56.3$ and $x = 236.3$