

Eliminating the Parameter

Name _____

Date _____

Eliminate the parameter in each set of equations. Your final answer should be fully simplified and in rectangular form (all x's and y's, no t's).

Remember that you will occasionally need to use $\sin^2(x) + \cos^2(x) = 1$

1.) $x(t) = 5 + t$
 $y(t) = 3t + 1$

5.) $x(t) = 3 \cos(t)$
 $y(t) = 4 \sin(t)$

2.) $x(t) = 6t - 1$
 $y(t) = 2t + 11$

6.) $x(t) = 8 - t$
 $y(t) = t^2 + 10t - 100$

For each below, fill in the table with the parametric equations

3.) $x(t) = 4t - 1$ $y(t) = -2t$

7.) $x(t) = 4 \sin(t)$

t	x	y
-3		
-2		
-1		
0		
1		
2		
3		

t	x	y
-3		
-2		
-1		
0		
1		
2		
3		

t	x	y
-3		
-2		
-1		
0		
1		
2		
3		

3.) $x(t) = \frac{3}{t}$
 $y(t) = 6t + 1$

7.) $x(t) = 10 \cos(t)$
 $y(t) = 5 \sin(t)$

4.) $x(t) = 3t$

6.) $y(t) = t^2 + 4$

8.) $x(t) = t^2$

4.) $x(t) = \sqrt{t - 7}$
 $y(t) = t^2 + 9$

8.) $x(t) = \frac{1}{t}$
 $y(t) = \frac{4}{t}$

t	x	y
-3		
-2		
-1		
0		
1		
2		
3		

t	x	y
-3		
-2		
-1		
0		
1		
2		
3		

t	x	y
-3		
-2		
-1		
0		
1		
2		
3		