$\qquad$

1. Write parametric equations and intervals for $t$ for each of the following:
a. Use conics
b. Use trig


c. Use conics

d. Use trig

2. Find the rectangular equation by eliminating the parameter.
a. $\mathrm{x}_{\mathrm{t}}=3 \mathrm{t}-3$
b. $\mathrm{x}_{\mathrm{t}}=\mathrm{t}+1$
c. $x=2 \cos$
$y_{t}=2 t+1$

$$
\mathrm{y}_{\mathrm{t}}=\frac{t}{t+1}
$$

$$
y=3 \sin
$$

$$
x=-10+4 t
$$

5) Graph the parametric equation

$$
y=9-2 t
$$

for the time interval $0 \leq t \leq 5$.

| t | $\mathrm{x}=$ | $\mathrm{y}=$ |
| :--- | :--- | :--- |
|  |  |  |
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|  |  |  |
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|  |  |  |
|  |  |  |

b) Eliminate the parameter and find the equation for the line.

6) Cole goes to a party and the path he walks through the party is modeled by the equation $\begin{gathered}x=2+2 t \\ y=1+t\end{gathered}$.

Lili is also at the party and her path of travel is modeled by the equation $\begin{gathered}x=12-4 t \\ y=3+t\end{gathered}$.
For the time interval $0 \leq t \leq 4$
a) Graph the path of each through the party.


b) Do their lines of travel intersect? $\qquad$
c) Do Cole and Lili run into each other? $\qquad$ If so,when? $\qquad$

