

Name: _____
11B SC

Per 3

Sketch!

1. $x = 6 \cos(t) - 2$
 $y = \sqrt{5} \sin(t)$
 $t \in (0, 270^\circ]$

a) Rectangular Form:

b) Type + Direction

c) Domain Range

2. $\frac{(y-6)^2}{16} - \frac{(x+9)^2}{24} = 1$

a) Parametric

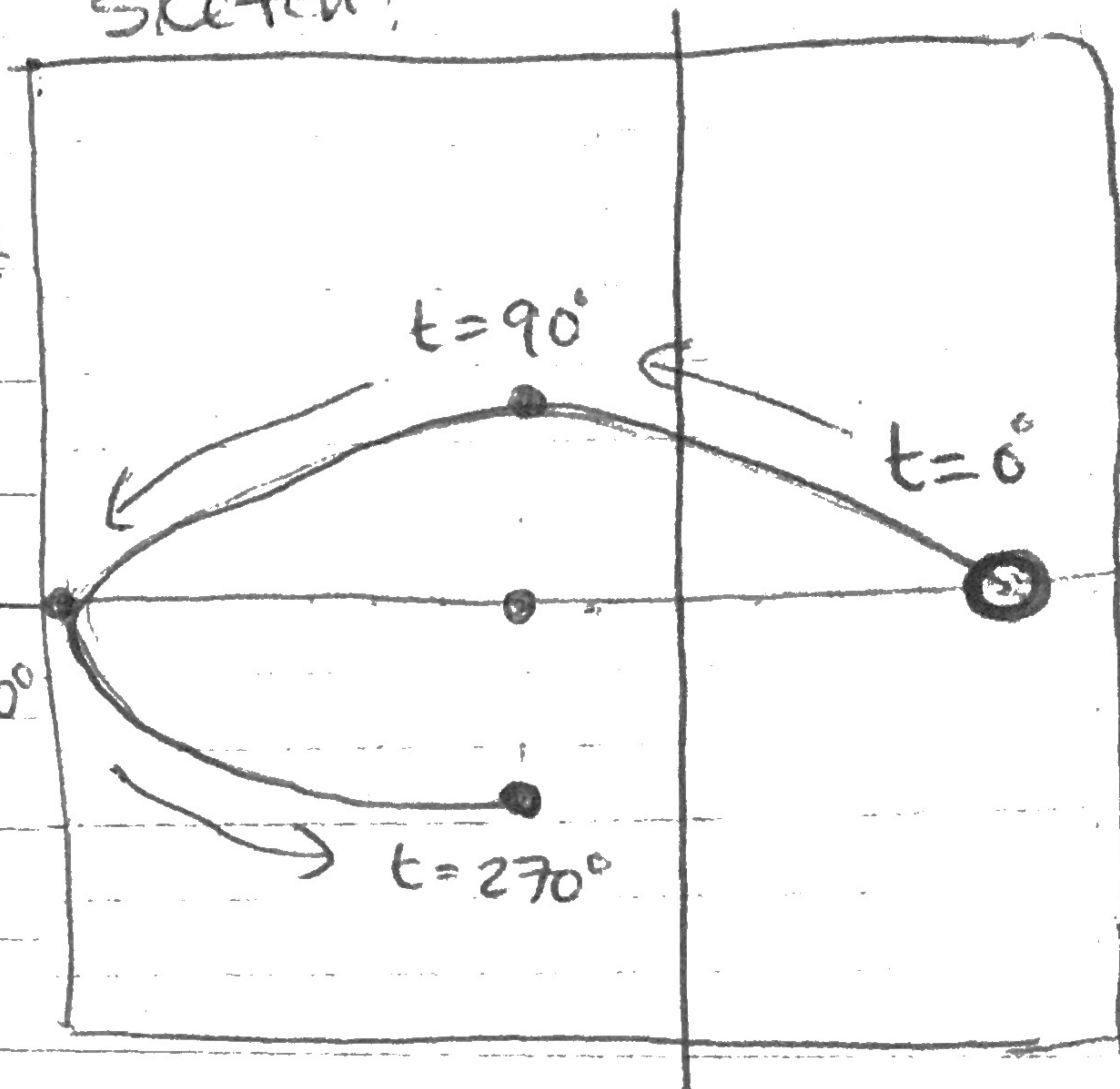
b) Domain Range

Name: Answer key
 11B SC

Per 3

Sketch!

1. $x = 6 \cos(t) - 2$ $\cos(t) = \frac{x+2}{6}$
 $y = \sqrt{5} \sin(t)$ $\sin(t) = \frac{y}{\sqrt{5}}$
 $t \in (0, 270^\circ]$



a) Rectangular Form:
 $\sin^2 t + \cos^2 t = 1$

$$\frac{(x+2)^2}{36} + \frac{y^2}{5} = 1$$

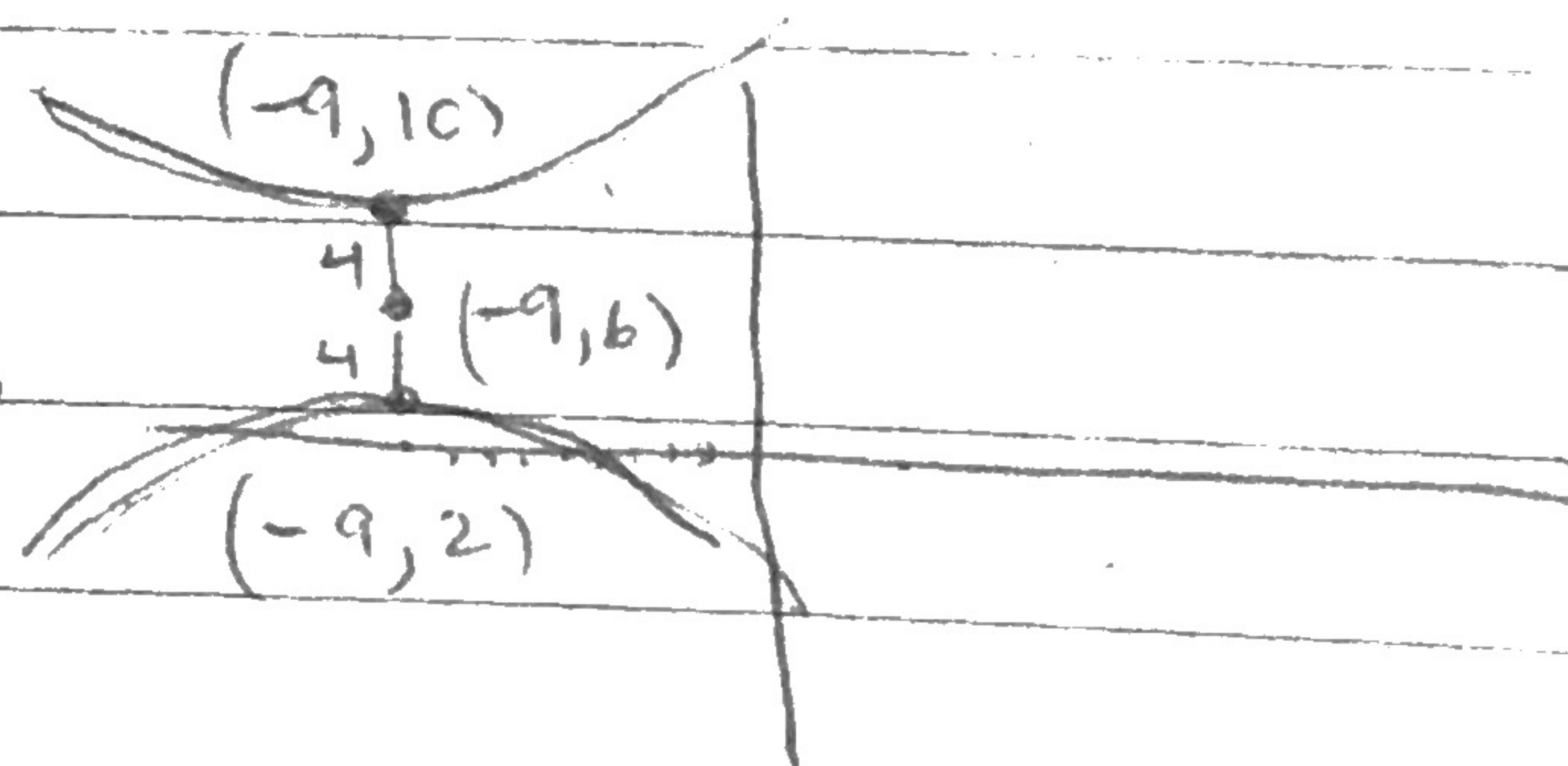
b) Type + Direction

- Ellipse
- Horizontal
- Counterclockwise

c) Domain Range

$$x \in [-8, 4) \quad y \in [-\sqrt{5}, \sqrt{5}]$$

2. $\frac{(y-6)^2}{16} - \frac{(x+9)^2}{24} = 1 \Rightarrow$



a) Parametric
 $\sec^2 t - \tan^2 t = 1$ or $\csc^2 t - \cot^2 t = 1$

b) Domain Range

$$\begin{cases} x = 2\sqrt{6} \tan(t) - 9 \\ y = 4 \sec(t) + 6 \end{cases}$$

$$x \in \mathbb{R} \quad y \leq 2 \text{ or } y \geq 10$$

or

$$\begin{cases} x = 2\sqrt{6} \cot(t) - 9 \\ y = 4 \csc(t) + 6 \end{cases}$$

$$y \in (-\infty, 2] \cup [10, \infty)$$