

Name: \_\_\_\_\_

Per 7

11B Skills check

1.  $x = 6 \cos(2t) = 2$   
 $y = \sqrt{5} \sin(2t)$   
 $t \in (0, 90^\circ]$

a) Rectangular Equation:

b) Conic & Direction

c) Domain Range

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

a) Parametric Equation:

b) Domain Range



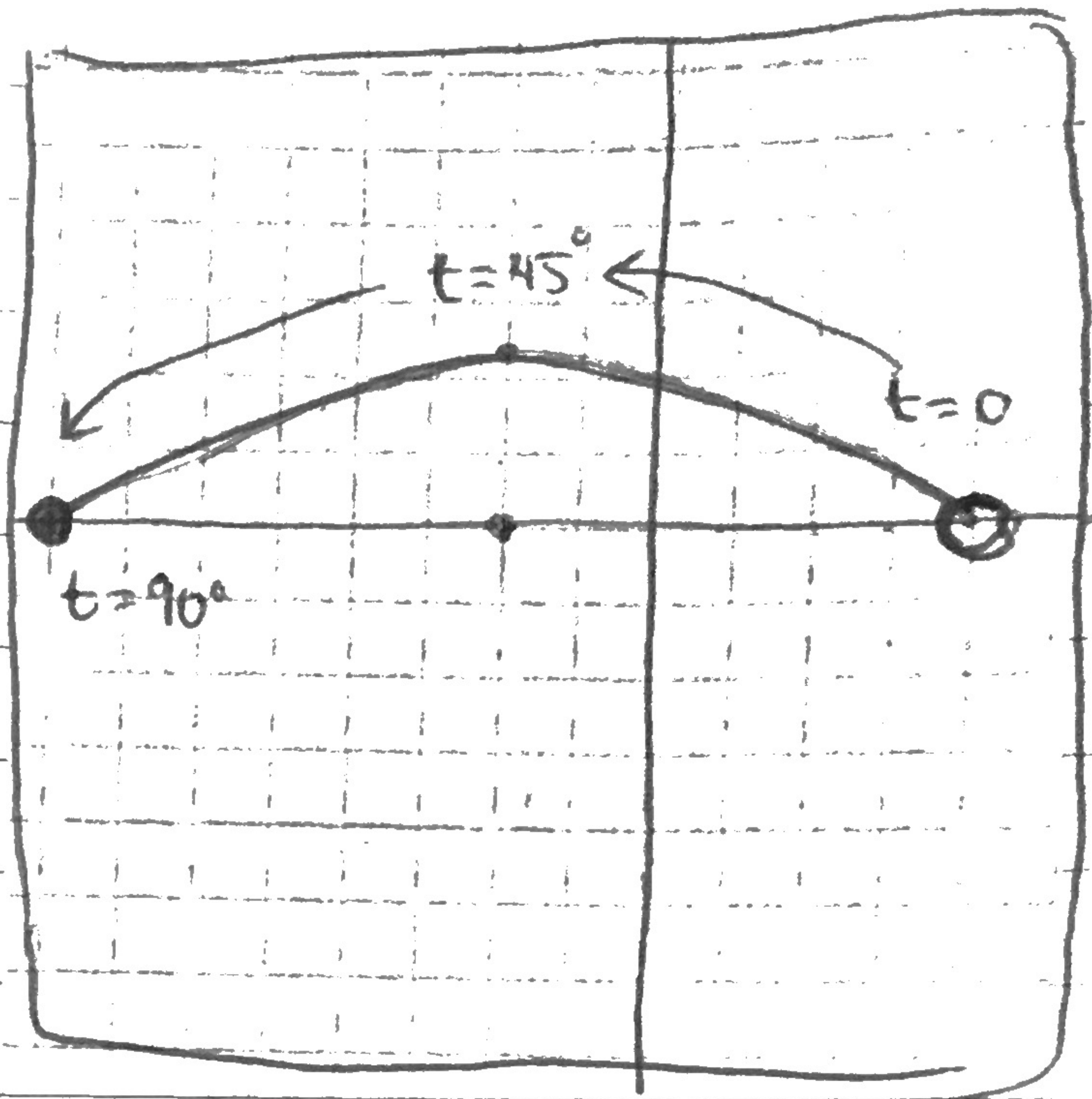
Name: Answer key

Per 7

11B Skills check

1.  $x = 6 \cos(2t) = 2 \implies \cos(2t) = \frac{x+2}{6}$   
 $y = \sqrt{5} \sin(2t) \implies \sin(2t) = \frac{y}{\sqrt{5}}$   
 $t \in (0, 90^\circ]$

$\sin^2 \theta + \cos^2 \theta = 1$



$t=0 (4, 0) \quad t=90 (-8, 0)$

a) Rectangular Equation:

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

b) Conic & Direction

- Ellipse
- Horizontal
- Counter clockwise

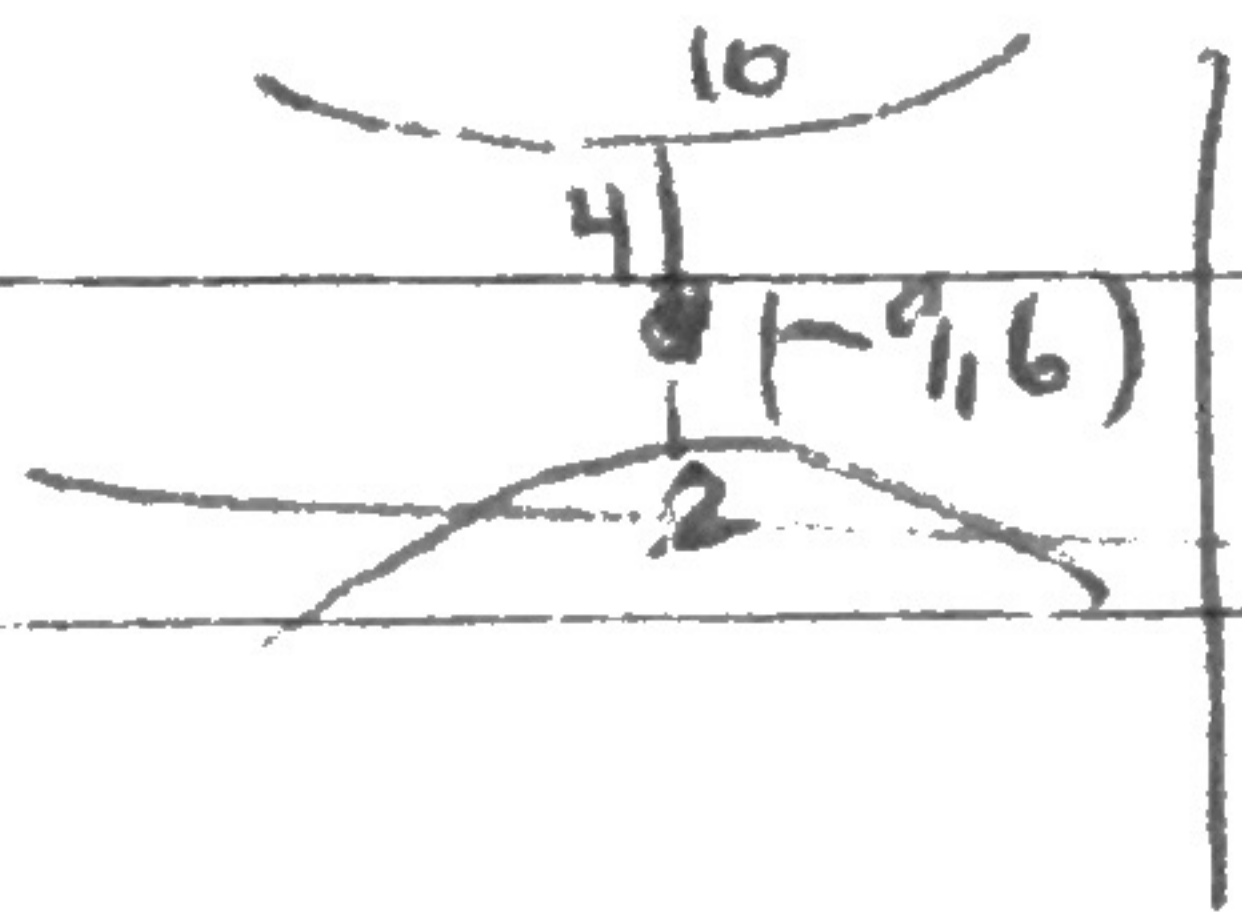
c) Domain Range

$$x \in [-8, 4) \quad y \in [0, \sqrt{5}]$$

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

$\sec^2 - \tan^2 = 1$

$\csc^2 - \cot^2 = 1$



a) Parametric Equation:

b) Domain Range

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

or

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

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

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