

8. Foci: $(-4, 0)$ $(4, 0)$ y -int: ± 3 LEFT

$h - c = -4$ $k = 0$ $h + c = 4$

$h - c = -4$
 $h + c = 4$
 $\underline{\underline{2h = 0}}$
 $h = 0$

$h + c = 4$
 $0 + c = 4$
 $c = 4$

$$\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$$

$$\frac{(x-0)^2}{a^2} + \frac{(y-0)^2}{b^2} = 1$$

$$\frac{y^2}{b^2} = 1$$

$$y^2 = b^2$$

$$3^2 = b^2$$

$$9 = b^2$$

$b = 3$

$$c = \sqrt{a^2 - b^2}$$

$$4 = \sqrt{a^2 - 3^2}$$

$$4^2 = (\sqrt{a^2 - 9})^2$$

$$16 = a^2 - 9$$

$$16 + 9 = a^2$$

$$25 = a^2$$

$$a = \sqrt{25}$$

$a = 5$

$a = 5$ $b = 3$ $c = 4$ $h = 0$ $k = 0$

$$\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$$

$$\frac{(x-0)^2}{5^2} + \frac{(y-0)^2}{3^2} = 1$$

$\frac{x^2}{25} + \frac{y^2}{9} = 1$

