

11.

$$16x^2 + 36y^2 + 96x - 288y + 144 = 0$$

$$\underbrace{16x^2 + 96x} + \underbrace{36y^2 - 288y} = -144$$

$$16(x^2 + 6x) + 36(y^2 - 8y) = -144$$

$x's$	$y's$
$(6 \cdot \frac{1}{2})^2$	$(-8 \cdot \frac{1}{2})^2$
$(3)^2$	$(-4)^2$
<u>9</u>	<u>16</u>

$$16(\underbrace{x^2 + 6x + 9}_{\text{blue}} - 9) + 36(\underbrace{y^2 - 8y + 16}_{\text{blue}} - 16) = -144$$

$$16(x^2 + 6x + 9) + 16(-9) + 36(y^2 - 8y + 16) + 36(-16) = -144$$

$$16(\underline{x+3})^2 - 144 + 36(\underline{y-4})^2 - 576 = -144$$

$$16(x+3)^2 + 36(y-4)^2 = -144 + 144 + 576$$

$$16(x+3)^2 + 36(y-4)^2 = 576$$

$$\frac{16(x+3)^2}{576} + \frac{36(y-4)^2}{576} = \frac{576}{576}$$

$$\frac{(x+3)^2}{36} + \frac{(y-4)^2}{16} = 1$$

$$h = -3 \quad k = 4 \quad a = 6 \quad b = 4$$

LEFT

