

$$5. x^2 + y^2 + 7x + 9y + \frac{49}{4} = 0$$

$$\textcircled{2} \quad \underline{x^2 + 7x} + \underline{y^2 + 9y} = -\frac{49}{4}$$

$$\frac{x's}{(7 \cdot \frac{1}{2})^2}$$

$$\frac{y's}{(9 \cdot \frac{1}{2})^2}$$

$\textcircled{3}$

$$(\frac{7}{2})^2$$

$$(\frac{9}{2})^2$$

$$\underline{x^2 + 7x + \frac{49}{4}} + \underline{y^2 + 9y + \frac{81}{4}} = -\frac{49}{4} + \frac{49}{4} + \frac{81}{4} \quad \frac{49}{4} \quad \frac{81}{4}$$

$$(x + \frac{7}{2})^2 + (y + \frac{9}{2})^2 = \frac{81}{4}$$

$$h = -\frac{7}{2}$$

$$k = -\frac{9}{2}$$

$$r = \sqrt{\frac{81}{4}}$$

$$r = \frac{9}{2}$$

CENTER:  $(h, k) = (-\frac{7}{2}, -\frac{9}{2})$  or  $(-3\frac{1}{2}, -4\frac{1}{2})$

RADIUS:  $r = \frac{9}{2}$  or  $4\frac{1}{2}$

