Take the x-term coefficient, multiply it by one-half, square it, and then add this to both sides of the equation.

Do the same with the *y*-term coefficient.

Convert the left side to squared form and simplify the right side.

$$(x^{2} - 4x) + (y^{2} - 6y) = -\frac{51}{4}$$

$$-2 \to +4 \qquad -3 \to +9$$

$$(x^{2} - 4x + 4) + (y^{2} - 6y + 9) = -\frac{51}{4} + 4 + 9$$

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

The center is at (h, k) = (x, y) = (2, 3). The radius is  $r = \text{sqrt}(\frac{1}{4}) = \frac{1}{2}$