

MORE PRACTICE: Completing the Square

What number is necessary to make the equation a “perfect square”?

1. $x^2 + 8x + \underline{\hspace{2cm}}$

2. $x^2 - 14x + \underline{\hspace{2cm}}$

3. $x^2 + 15x + \underline{\hspace{2cm}}$

4. $x^2 - \frac{1}{2}x + \underline{\hspace{2cm}}$

Complete the squares to write the conic sections in their standard form.

5. $x^2 - 16x + y^2 + 6y + 48 = 0$

6. $x^2 + 6x + y^2 - 8y + 9 = 0$

7. $x^2 + 10x - 4y + 1 = 0$

8. $25x^2 - 150x - 16y^2 + 64y - 239 = 0$

9. $9x^2 + 18x + 4y^2 + 16y - 119 = 0$

10. Graph the conic section: $4x^2 + 24x - y^2 - 2y + 19 = 0$

