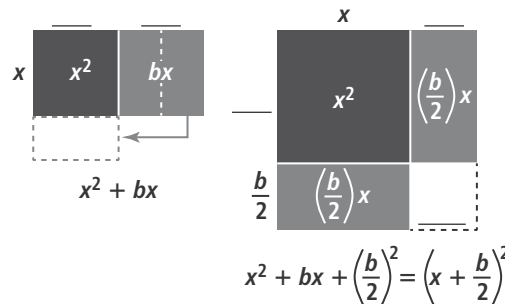




9-5 Reteach to Build Understanding

Completing the Square

1. Label each part of the diagram to show how to complete the square.



2. Fill in the blanks to find the solutions of $x^2 - 18x + 15 = 0$ by completing the square.

Write the equation in the form $ax^2 + bx = d$. $x^2 - 18x = \underline{\hspace{2cm}}$

Complete the square. $x^2 - 18x + \underline{\hspace{1cm}} = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

$$x^2 - 18x + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

Write the trinomial as a binomial squared. $(x - \underline{\hspace{1cm}})^2 = \underline{\hspace{1cm}}$

Solve for x . $x - \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

$$x = \underline{\hspace{1cm}} \pm \underline{\hspace{1cm}}$$

3. The side lengths of a rectangle are given as $x + 8$ and $x - 2$. Reece calculated the area of the rectangle by completing the square. Find and correct her error.

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

$$x^2 + 6x = 16$$

$$x^2 + 6x + 9 = 16 + 9$$

$$x^2 + 6x + 9 = 25$$

$$(x + 3)^2 = 25$$

$$x + 3 - 3 = 25 - 3$$

$$x = 22$$