



## 7-5 Reteach to Build Understanding

Factoring  $x^2 + bx + c$

1. Match each example of factoring to the appropriate description.

When both  $b$  and  $c$  are positive, the second terms of the binomials are both positive.

When  $b$  is negative and  $c$  is positive, the second terms of the binomials are both negative.

When  $c$  is negative, the second terms of the binomials have opposite signs.

$$x^2 - 7x + 10 =$$

$$(x - 5)(x - 2)$$

$$x^2 - 3x - 10 =$$

$$(x - 5)(x + 2)$$

$$x^2 + 7x + 10 =$$

$$(x + 5)(x + 2)$$

2. Complete the steps for factoring  $x^2 - 10x + 24$  by filling in the blanks with a word or a number. Then write the factored form in the last sentence.

Identify a pair of factors for \_\_\_\_\_ that have a sum equal to \_\_\_\_\_.

Because  $b$  is \_\_\_\_\_ and  $c$  is \_\_\_\_\_ in the trinomial

$x^2 - 10x + 24$ , the second term in both factors will be \_\_\_\_\_.

The factored form of  $x^2 - 10x + 24$  is \_\_\_\_\_.

3. Shannon said she can find the factored form of a trinomial of the form  $x^2 + bx + c$  from the factors of  $b$ . The sum of the factors of  $b$  will equal  $c$ . Explain Shannon's error.