

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**BLM 7.4.1**

## Practice: Factor Trinomials of the Form $x^2 + bx + c$

- Find a pair of integers with each product and sum.
  - Product: 80      Sum: 18
  - Product: 27      Sum: 12
  - Product: 36      Sum: 13
  - Product: 32      Sum: 12
- Find a pair of integers with each product and sum.
  - Product: 10      Sum:  $-7$
  - Product:  $-40$       Sum:  $-3$
  - Product: 35      Sum:  $-12$
  - Product: 24      Sum:  $-11$
- Factor each trinomial.
  - $x^2 + 4x - 12$
  - $x^2 + 8x + 15$
  - $x^2 - 6x - 16$
  - $x^2 - 5x - 14$
- Determine the dimensions of each rectangle, given the area.
  - $x^2 - 3x - 4$
  - $x^2 + 2x - 24$
  - $x^2 - 4x - 21$
  - $x^2 + 7x + 10$
- The surface area of a teacher's desk is represented by  $x^2 - 8x + 15$ .
  - What are the dimensions of desk?
  - Find the actual dimensions if  $x = 100$  cm.
- The surface area of a rectangular door locker is represented by  $x^2 + 6x - 16$ .
  - What are the dimensions of the locker door?
  - Find the actual dimensions if  $x = 80$  cm.
- The area of a television screen is represented by  $x^2 + 3x - 18$ .
  - What are the dimensions of television?
  - Find the actual dimensions if  $x = 75$  cm.
- The area of the gym floor is represented by  $x^2 - x - 20$ .
  - What are the dimensions of the gym floor?
  - Find the actual dimensions if  $x = 10$  m.
- The area of Mary's swimming pool is represented by  $x^2 + 10x + 21$ .
  - What are the dimensions of the pool?
  - Find the actual dimensions if  $x = 4$  m.
- The perimeter of a rectangular sandbox is 30 m. The area is represented by  $x^2 + 7x - 8$ . Find the actual dimensions of the sandbox.