General Trinomial:

- When you multiply two binomial factors which are not identical, the result is a quadratic trinomial or general trinomial.
- An expression in the form

$$ax^2 + bx + c$$

where a, b, and c are integers

Types of General Trinomials:

- 1. Trinomial in the form of $ax^2 + bx + c$, where a = 1
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Steps in Factoring Trinomials with 1 as Leading Coefficient:

- 1. Factor out the greatest common monomial of all terms of the given trinomial.
- 2. List the factors of the last term (c).
- 3. Find two factors with a product equal to the last term (c) and a sum equal to the middle term (b).
- 4. Write the factored form of the trinomial following the

(x + first factor)(x + second factor)

Practice Exercises 1.3.1

Factor the following polynomials completely.

1.
$$x^2 - x - 20$$

6.
$$a^2 - 2ab - 3b^2$$

2.
$$x^2 + 17x + 72$$

7.
$$m^2 + mn - 12n^2$$

3.
$$a^2 + 10a + 24$$

8.
$$2a^3 + 20a^2 + 48a$$

4.
$$m^2 - m - 42$$

9.
$$c^2 - 6cd + 5d^2$$

5.
$$2a^3 - 6a^2 - 36a$$

10.
$$2m^2 + 10mn + 12n^2$$

Activity 1.3.1

Factor the following polynomials completely.

1.
$$x^2 + 4x - 21$$

6.
$$3m^2 + 6mn - 45n^2$$

2.
$$x^2 - 5x - 14$$

3. $2a^3 + 20a^2 + 48a$

7.
$$2b^3 + 10b^2c - 28bc^2$$

4.
$$m^2 + m - 12$$

8.
$$c^2 - 11cd + 24d^2$$

9. $5m^3 - 20m^2 + 15m$

5.
$$a^2 - 8a - 48$$

10.
$$4a^2 + 24a - 64$$

Lesson 1.3.1: Factoring Trinomials with 1 as Leading Coefficient

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