Section 6.7 Factoring by Special Products

# Objective 1: Factoring a Perfect Square Trinomial

A trinomial is a **perfect square trinomial** if it can be written so that its first term is the square of some quantity , its last term is the square of some quantity , and its middle term is twice the product of the quantities and .

**Perfect square trinomials:**

Factor: .

# Objective 2: Factoring the Difference of Two Squares

A binomial is a **difference of two squares** when it is the difference of the square of some quantity and the square of some quantity .

**Difference of two squares:**

Factor.

|  |  |
| --- | --- |
| a. | b. |
|  |  |

# Objective 3: Factoring the Sum or Difference of Two Cubes

The **sum of two cubes** and the **difference of two cubes** can be factored using the following identities.

**Sum and difference of two cubes:**

Factor.

|  |  |
| --- | --- |
| a. | b. |