3) $x^2 - 20x + 100$

4) $x^2 - 8x + 16$

5) $9x^2 + 24x + 16$

6) $4x^2 + 12x + 9$

7) $25x^2 - 40x + 16$

8) $16x^2 - 56x + 49$

3. **Factoring polynomials completely**

a. A polynomial is factored completely when each of its factors cannot be factored further.

b. **Example**:

1) $10x^2 - 40 = 10(x^2-4) = 10(x + 2)(x - 2)$

2) $2x^3 - 72x = 2x(x^2-36) = 2x(x + 6)(x - 6)$

c. **Exercise:** Factor the following polynomials completely:

1) $2x^3 - 50x$

2) $3x^3 + 18x^2 - 48x$

3) $10x^4 + 50x^3 - 500x^2$

4) $2x^3 - 72x$

5) $2x^2 + 14x + 20$

6) $3x^2 + 15x + 12$