MAT.0650 - Elementary Algebra
Chapter 4 (Sep, 29)

- **Section 4.1** Factor each polynomial.

    1. $24a + 18$
    2. $32s^2 - 24s^2t$
    3. $54m^2n^2 - 27m^2n + 18mn^2$
    4. $8a^2b + 24ab - 16ab^2$
    5. $x(2x - y) - y(2x - y)$
    6. $6x^2y - 3xy^3 + 12xy^2 - 9x^3y$

- **Section 4.2** Factor each trinomial.

    1. $x^2 + 7x + 10$
    2. $x^2 - 7x + 12$
    3. $x^2 - x - 12$
    4. $x^2 + x - 20$
    5. $x^2 + 8x + 16$
    6. $x^2 - 10x + 25$
    7. $x^2 - 9x - 36$
    8. $x^2 - 4xy - 21y^2$
    9. $x^3 + 2x^2 - 35x$
    10. $3x^3 - 48x^2 + 189x$

- **Section 4.3** Factor each trinomial completely.

    1. $3x^2 + 8x + 5$
    2. $2x^2 - 9x + 9$
    3. $10x^2 - 11x + 3$
    4. $9x^2 - 3xy - 20y^2$
    5. $8x^3 - 36x^2 - 20x$
    6. $6x^3 - 3x^2 - 9x$

- **Section 4.4** Factor each polynomial completely.

    1. $x^2 - 25$
    2. $x^2 - 16y^2$
    3. $9 - x^2$
    4. $3x^3 - 12xy^2$
    5. $2x^2 - 72y^4$
    6. $x^2 + 8x + 16$
    7. $4x^2 + 12x + 9$
    8. $16x^3 + 40x^2 + 25x$

- **Section 4.5** Factor each polynomial completely.

    1. $x^2 - 4x + 5xy - 20y$
    2. $6x^2 + 4x - 15xy - 10y$

    3. $6x^3 + 9x^2 - 4x^2y - 6xy$

- **Section 4.6** Solve each quadratic equation by factoring.

    1. $(x - 1)(2x + 3) = 0$
    2. $x^2 - 10x = 0$
    3. $x^2 - 2x = 15$
    4. $4x^2 - 13x + 10 = 0$
    5. $3x^2 - 9x = 0$
    6. $2x^2 - x - 3 = 0$