MAT.0650 - Elementary Algebra

Chapter 4 (Sep, 28)

- **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. $12x + 18$
  2. $5x^2 - 10x + 20$

3. $x^2 - 10x + 25$
4. $49x^2 - 16y^2$
5. $x^2 - 5x - 14$
6. $x^2 - 11x + 28$
7. $x^2 + 2x - 5x - 10$
8. $2x^2 + 15x - 8$
9. $8x^2 - 2xy - 3y^2$

- **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. $2x^2 - x - 3 = 0$