

Math 1060 Intermediate Algebra

Catalog Description:

This regular course in intermediate algebra includes solutions of first and second degree equations and inequalities, exponents and radicals, logarithms, and the algebra of polynomials.

SLO:

Course #1 - Solve quadratic equations by factoring and the quadratic formula.

Course #2 - Simplify rational expressions with quadratic numerators and denominators.

Sample Problems:

Solve the equations.

1. $3x + 2(x - 4) = 4(x - 2)$

2. $0.3x + 0.9x = 0.06$

3. $\frac{2}{3}n - \frac{1}{2}(n - 4) = 3$

4. Solve for t : $A = P + Prt$

Solve each system of equations.

5. $4x - y = -6$
 $2x + 3y = 4$

6. $5x + 2y = 29$
 $x = y + 3$

Perform the indicated operations.

7. $(2k^2 + 4k) - (5k^2 - 2) - (k^2 + 8k - 6)$

8. $(9x + 6)(5x - 3)$

9. $(3p + 2)^2$

Factor completely.

10. $2a^2 + 7a - 4$

11. $10m^2 + 19m + 6$

12. $8t^2 + 10tv + 3v^2$

Solve each equation.

13. $6m^2 + m - 2 = 0$

14. $8x^2 = 64x$

15. $49x^2 - 56x + 16 = 0$

Answers

1. $x = 0$

2. $x = 0.05$

3. $n = 6$

4. $t = \frac{A - P}{Pr}$

5. $(-1, 2)$

6. $(5, 2)$

7. $-4k^2 - 4k + 8$

8. $45x^2 + 3x - 18$

9. $9p^2 + 12p + 4$

10. $(2a - 1)(a + 4)$

11. $(2m + 3)(5m + 2)$

12. $(4t + 3v)(2t + v)$

13. $\left\{-\frac{2}{3}, \frac{1}{2}\right\}$

14. $\{0, 8\}$

15. $\left\{\frac{4}{7}\right\}$