

Alg I 9.62

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $2n^2 - 2n - 24 = 0$

2) $m^2 - m - 2 = 0$

3) $2x^2 + 2x - 4 = 0$

4) $n^2 - 16 = 0$

5) $n^2 - 5n + 4 = 0$

6) $2x^2 + 2 = 0$

Solve each equation by completing the square.

7) $n^2 + 4n - 21 = 0$

8) $n^2 + 2n - 15 = 0$

$$9) v^2 - 10v - 11 = 0$$

$$10) n^2 + 10n + 16 = 0$$

Find the x intercepts, vertex, and the axis of symmetry.

$$11) k^2 - 6k - 16 = 0$$

$$12) r^2 + 10r + 16 = 0$$

Find the discriminant of each quadratic equation then state the number and type of solutions.

$$13) 9r^2 + 6r + 1 = 0$$

$$14) 3n^2 + 6n - 9 = 0$$

$$15) -k^2 - 7k + 8 = 0$$

$$16) -10x^2 - 2x - 10 = 0$$

Answers to Alg I 9.62 (ID: 1)

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|--------------------------------------|-----------------------------|----------------------------|------------------|
| 1) $\{4, -3\}$ | 2) $\{2, -1\}$ | 3) $\{1, -2\}$ | 4) $\{4, -4\}$ |
| 5) $\{4, 1\}$ | 6) No solution. | 7) $\{3, -7\}$ | 8) $\{3, -5\}$ |
| 9) $\{11, -1\}$ | 10) $\{-2, -8\}$ | 11) $\{-2, 8\}$ | 12) $\{-8, -2\}$ |
| 13) 0; one real solution | 14) 144; two real solutions | 15) 81; two real solutions | |
| 16) -396 ; two imaginary solutions | | | |