

Classwork Quadratic Equations

Please work all problems on a separate sheet of paper.

In problems 1 – 4, use the Zero Product Theorem to find the solutions of the quadratic equations. (solve by factoring)

1. $8x^2 - 2x = 0$

2. $5x^2 - 20 = 0$

3. $-2x^2 + 10x - 8 = 0$

4. $(x+3)(x-4) = 8$

In problems 5 – 8, use the Extraction of Roots Theorem to find the solutions of the quadratic equations.

5. $5x^2 = 9$

6. $(2x+1)^2 = 9$

7. $(3x+1)^2 = -9$

8. $3(x-2)^2 + 4 = 10$

In problems 9 – 11, find the solutions of the quadratic equations by completing the square.

9. $x^2 + 8x + 12 = 0$

10. $x^2 - 6x - 1 = 0$

11. $4x^2 + 8x + 1 = 0$

In problems 12 – 14, find the solutions of the quadratic equations by using the quadratic formula.

12. $x^2 + 10x + 14 = 2x - 3$

13. $(x-2)^2 = 2(x-5)$

14. $9x^2 + 32x - 4 = 3x^2 + 11x - 4$