Algebra 2   Chapter 6 In-Class Practice Test

Name _____

Factor the problems below.

_____   1. $8x^2 + 10x + 3$

_____   2. $5n^2 - 22n + 8$

Solve for the variable using your skills of factoring.

_____   3. $x^2 + 8x = 20$

_____   4. $6x^2 + 13x - 5 = 0$ (Busting B will be needed)

Solve for the variable using your knowledge of square roots. Round your answers to the nearest tenth.

_____   5. $10n^2 - 1000 = 0$

_____   6. $2(n - 1)^2 - 32 = 0$
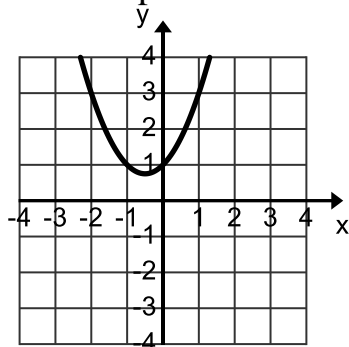
_____   7. $3(b - 4)^2 - 24 = 0$

Match the graph with the correct discriminant value.
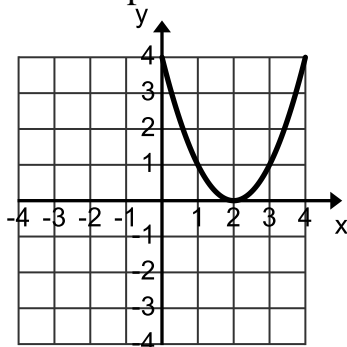
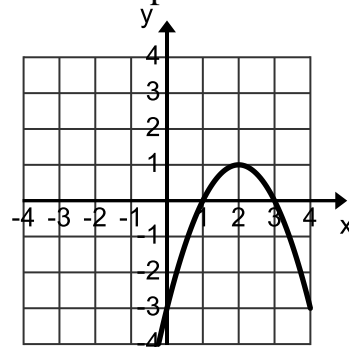_____ 8. discriminant $= 11$ _____ 9. discriminant $= 0$ _____ 10. discriminant $= -176$

Graph A

Graph B

Graph C

For 11-16, use these letters to tell how many times the parabola crosses the x-axis.
 A = crosses x-axis at 2 points   **B = crosses x-axis at 1 point**   **C = doesn't cross x-axis**

_____ 11. discriminant = 5   _____ 12. discriminant = 56   _____ 13. discriminant = -16

_____ 14. discriminant = 0   _____ 15. discriminant = -66   _____ 16. discriminant = 4

Use the quadratic equation to solve these equations.   Round your answers to the nearest tenth.

Quadratic Formula is $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ I gave you room to show your work.

_____ 17. $x^2 + 4x + 4 = 0$ _____ 18. $x^2 + 3x + 10 = 0$

_____ 19. $-2x^2 + 3x + 9 = 0$ _____ 20. $x^2 + x - 6 = 0$