Name_____
Algebra 2 Unit 2B Remediation

Target 1 Remediation

Simplify each expression completely.

1. i^{71}
2. i^{265}
3. $\sqrt{-175}$
4. $\sqrt{-5} \cdot \sqrt{-10}$

5. $4(1+3i)-(5-9i)$
6. $(-2+7i)(5-i)$
7. $(8+2i)^2$

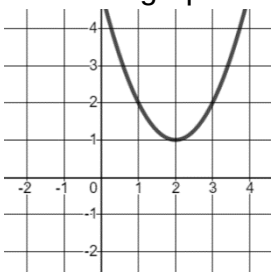
Target 2 Remediation

Solve each equation.

8. $x^2+8x=-12$
9. $7x^2=-126$

10. Find the discriminant of $x^2-6x+2=0$

11. Which of the following describes the nature of the roots of the function whose graph is shown.



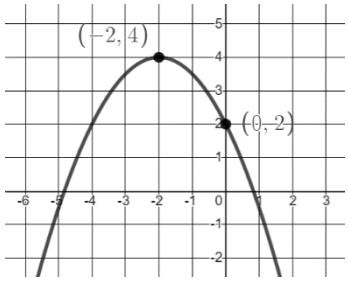
a. 2 real rational roots
b. 1 real root (double root)
c. 2 complex roots
d. 2 real irrational roots

12. $3(x-5)^2-18=0$
13. $x^2-18x-11=0$

14. $10x^2+5x+2=-3$
15. $8x^2+40x=0$

Target 3 Remediation

16. Write an equation for the quadratic graphed in **vertex form**.



17. Write an equation in **intercept/factored form** for the quadratic with roots at $x = \{1, 3\}$ and includes the point (4,12).

18. Write an equation in **standard form** for the quadratic with a vertex at (-1, 4) and a y-intercept at (0,3).

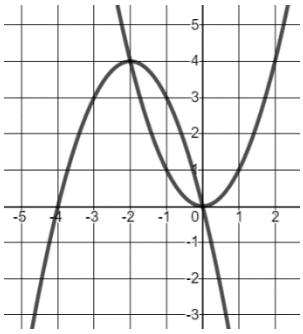
Target 4 Remediation

19. What are the solutions to the system?

$y = (x - 3)^2 - 2$

$y = -2x + 4$

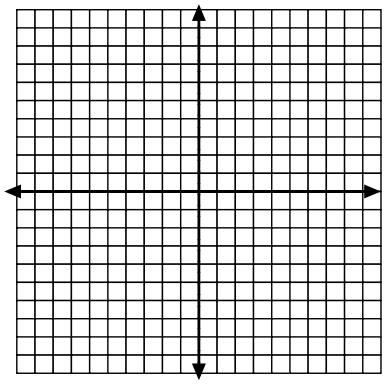
20. Circle the solutions to the system.



21-22 Solve each system graphically.

21. $y = .5(x - 1)^2 - 2$

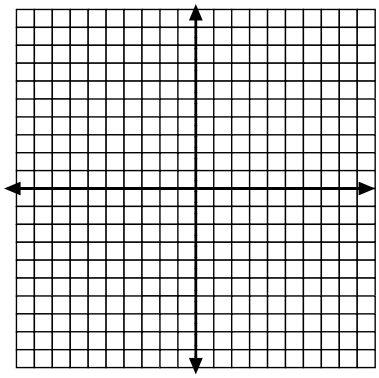
$y = 2x^2 - 4x$



The solution is:_____

22. $-2x - y = 4$

$y = x^2 + 4x + 5$



The solution is:_____

23. Solve algebraically.

$y = x^2 - 8x + 11$

$-x + y = 3$