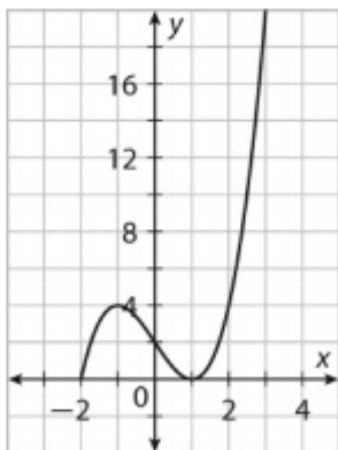


ALGEBRA II REVIEW CHAPTERS 1 TO 4

DOMIAN – RANGE - - INVERSE FUNCTIONS – ABSOLUTE VALUE – QUADRATIC FUNCTIONS

Use the graph to answer Problems 1–4.



1. On which intervals is the function increasing and decreasing?

2. What are the local maximum and minimum values?

3. What are the zeros of the function?

4. What is the domain and range?

5. Describe the end behavior using symbolic notation.

For each function f , find f^{-1} and the domain and range of f and f^{-1} . Determine whether f^{-1} is a function.

6. $f(x) = 6x + 1$

7. $f(x) = \sqrt{x+4}$

8. $f(x) = \sqrt{x-3}$

9. $f(x) = \sqrt{-5x+2}$

10. $f(x) = 3x^2 + 1$

11. $f(x) = 2 - x^2$

ALGEBRA II REVIEW CHAPTERS 1 TO 4**Solve each equation. Check your answers.**

12. $|4m + 2| = 10$

13. $|9 - 4z| = 53$

14. $|5x| = 30$

15. $|3x - 6| - 7 = 14$

16. $3|2d - 1| = 21$

17. $|2v + 3| - 6 = 14$

Solve each inequality. Graph the solution.

18. $2|3y - 5| + 6 > 15$

19. $3|2z + 5| + 2 \leq 8$

Solve each equation by completing the square or using the Quadratic Formula.

20. $x^2 + 5x + 8 = 4$

21. $2x^2 - 5x + 1 = 0$

22. $x^2 - 7x = 0$

23. $x^2 + 4x + 4 = 0$

24. $x^2 - 7 = 0$

25. $x^2 + 8x - 17 = 0$

Solve each system.

26.
$$\begin{cases} y = x^2 - 11x + 24 \\ y = x - 3 \end{cases}$$

27.
$$\begin{cases} y = x^2 + 2x - 8 \\ y = x + 4 \end{cases}$$

28.
$$\begin{cases} y = 2x^2 + 9x - 5 \\ y = x + 5 \end{cases}$$