

Algebra 2 Units 1-3

Review

1. $-22 + -14$

2. $(18)(13)$

3. $0 \div 16$

4. $20 - -7$

5. Simplify. $\frac{4\sqrt{5}}{\sqrt{32}}$

6. Simplify. $\frac{a^9c^2d^{-7}}{a^{10}b^{-2}c}$

7. Write in set-builder notation. $[-4, 20]$

8. Write in interval notation. $\{x \mid 0 \leq x < 7\}$

9. Write the parent function for a linear function.

10. Write the parent equation for the square root function.

11. Is the relation a function?
 $\{(-1, 0), (0, 4), (1, 0), (-2, 0), (4, 2)\}$

12. Write the equation of the line with a slope of 2 that goes through the point $(5, 3)$ in **point-slope form**.

13. Write the equation of the line with a slope of -2 that goes through $(0, 4)$ in **slope-intercept form**.

14. Identify RST & rst. $f(x) = -3(x - 4)^2 + 7$

15. $g(x) = 2x^2 - 5x + 3$
 $g(3) = ?$

16. If a system is independent, then is it consistent or inconsistent?

17. A dependent system has how many solutions?

18. What is a consistent system with one solution called?

19. Is $(2, 7)$ a solution to the system shown below?

$$\begin{cases} 2x - 3y = 4 \\ 2x + 8y = 26 \end{cases}$$

Solve each system of equations.

20. $\begin{cases} y - 3 = 4x + 7 \\ y = 2x + 8 \end{cases}$

21. $\begin{cases} 3y - 5x = 10 \\ -y + 2x = 4 \end{cases}$

22. $\begin{cases} 6x + 2y = -4 \\ 2x + 8y = 6 \end{cases}$

23. $\begin{cases} 2x + 3y - 6z = 20 \\ -x + 4y - z = 1 \\ 5x - y + 8z = 33 \end{cases}$

Use a 3-dimensional axis to answer the question about the given point.

24. The point $(9, 5, 3)$ moves 5 units in what direction?

Graph the system of inequalities. What is the shape of the shaded area?

25. $\begin{cases} y \leq -2x + 4 \\ y \leq x + 3 \\ y \geq 3x - 1 \end{cases}$