Name: _____ Per: _____

Algebra 2 Unit 1 Study Guide

Simplify.

1. 6 - -2
2. 8 ÷ -4
3. (7)(22)

Evaluate.

4. $2x + 1 + 6x + 5 = 9x + 4 + 3x - 10$
5. $x^2 + 6 + x^2 = 3x^2 - 19$
6. $5\sqrt{x} + 1 - 3\sqrt{x} - 3 = 4$

Write in Interval Notation.

7. $5 \le x < 7$
8. $x \le 12$

Write in Set-Builder Notation

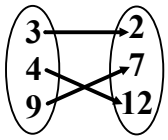
9. $5 \le x < 7$
10. $x \le 12$

Simplify.

11. $\sqrt{24}$
12. $\frac{2}{5\sqrt{6}}$
13. $\sqrt{\frac{64}{9}}$
14. $x^2 = 36$
15. $\frac{m^2n^5p^6}{n^4s^{-2}p^{15}}$
16. $\frac{x^2y^3x^5z}{y^2z^4y^3}$
17. $\left(\frac{a^0b^2c^{-4}}{bc^5d}\right)^{-2}$

Determine if the relation is a function.

18.



19. {(3,7), (4, 7), (5, 7), (6, 7)}

20.

X	Y
4	3
5	2
5	7
6	8

Identify the function family.

21. $f(x) = -4(x - 6)^3 - 2$
22. $h(x) = 7$

Solve.

23. $g(x) = 3x - 5 \quad g(4) = ?$

24. $j(x) = -2x^2 + x + 1 \quad j(5) = ?$

25. Identify RST & rst for the function shown below.
$m(x) = -(2x + 1)^2 - 8$