

Practice Test Chapter 1 Algebra 2

Re-write using interval notation.

1) $\{x \mid -2 < x < 7\}$

2) $\{x \mid x \leq -2 \text{ or } x > 6\}$

Classify each number by the subsets of the real numbers to which it belongs.

3) 5

4) $2\sqrt{3}$

5) Which of the following multiplied by $5\sqrt{3}$ is a rational number?

a) 3

b) $\sqrt{192}$

c) $\sqrt{12}$

d) $\sqrt{50}$

Identify the property demonstrated by each equation.

6) $3(2)(5) = 3(5)(2)$

7) $5+(x+y) = (5+x)+y$

Find the additive and multiplicative inverse of each number.

8) 3

9) $\frac{2}{3}$

Simplify.

10) $\sqrt{135}$

11) $\frac{\sqrt{196}}{\sqrt{7}}$

12) $5\sqrt{3} - \sqrt{24}$

13) $\sqrt{5} \cdot \sqrt{35}$

14) $\frac{7}{\sqrt{2}}$

Evaluate.

15) $-x^2 + 3xy$ for $x = -3$ and $y = 5$

16) $-2x^2 + 3x - 1$ for $x = -3$

Simplify.

17) $5(2x + 3y) - 5x + 3y$

18) $10 - (3x - 11)$

19) $\frac{-72x^8y^3}{9x^{-2}y^6}$

20) $(-8x^{-3}y^5)^3$

21) $\left(\frac{7xy}{5x^3y^{-4}}\right)^{-3}$

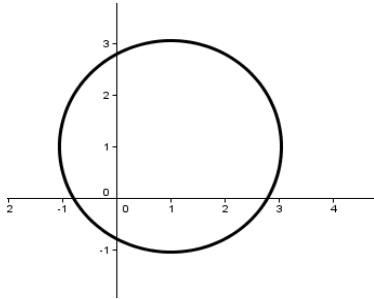
22) $(7x^5y^6)(-3x^2y)$

Determine whether the following relations are functions and state the domain and range for each.

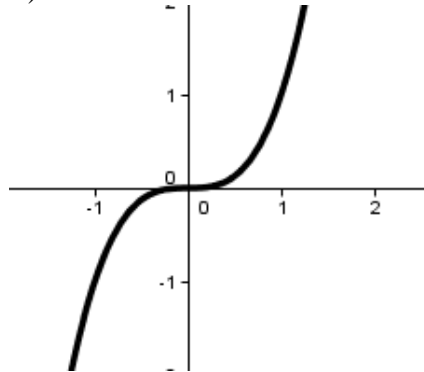
23) $y = 7x - 1$

24) $\{(6, 5), (3, 5), (7, 2), (8, 4)\}$

25)



26)



Evaluate the following.

27) $f(x) = -4x^2 + 2x - 6$

28) $f(x) = -8x + 3$

a) $f(-5)$

a) $f(-4)$

b) $f(3)$

b) $f(0)$

Identify the parent function and describe the transformation.

29) $y = -x^2$

30) $f(x) = (x - 7)^3 + 3$

31) $y = .5x$

32) $f(x) = 4x^2$