

Solve the given equation or inequality. If an equation is given, then write the solution set in set notation. If an inequality is given, then write the solution set in interval notation.

9) $|x + 8| + 7 = 15$

A) no solution

B) $\{0, 16\}$

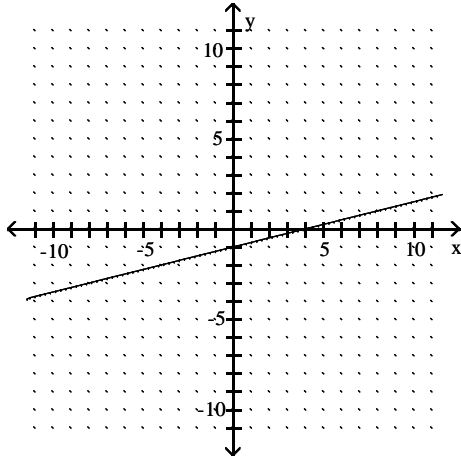
C) $\{0\}$

D) $\{-16, 0\}$

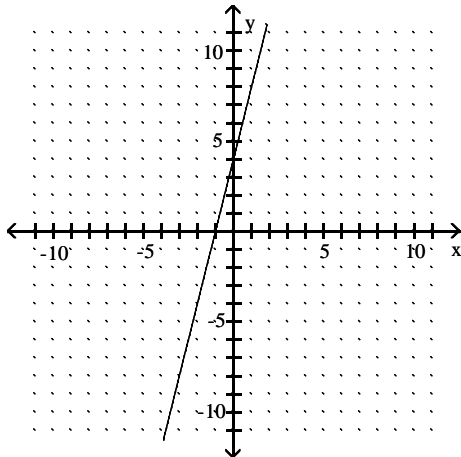
Find the x- and y-intercepts. Then graph the equation.

10) $2x - 8y = 8$

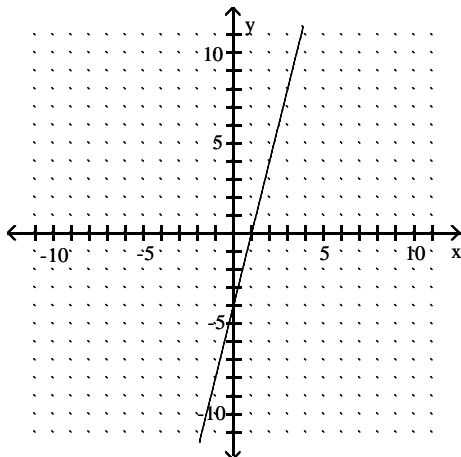
A) $(4, 0); (0, -1)$



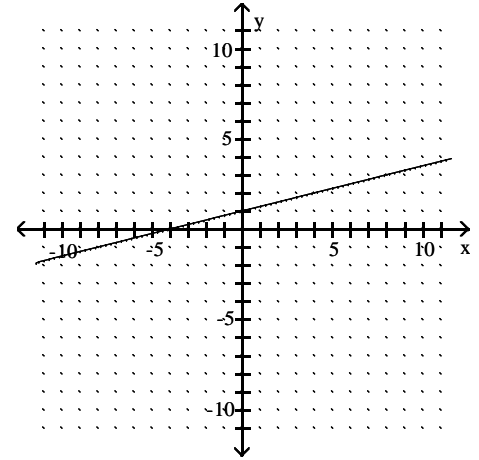
B) $(-1, 0); (0, 4)$



C) $(1, 0); (0, -4)$



D) $(-4, 0); (0, 1)$



Find the slope of the line through the pair of points.

11) $(9, -3)$ and $(-2, 3)$

A) $\frac{11}{6}$

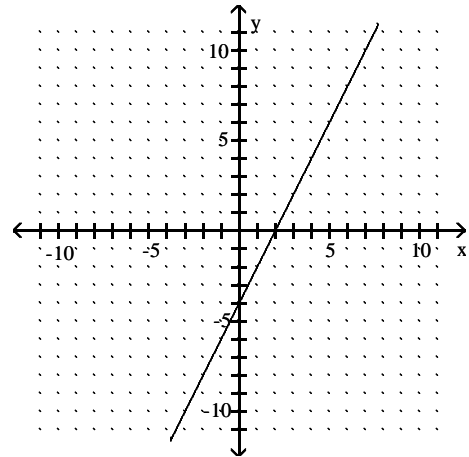
B) $-\frac{6}{11}$

C) $\frac{6}{11}$

D) $-\frac{11}{6}$

Find the slope of the line.

12)



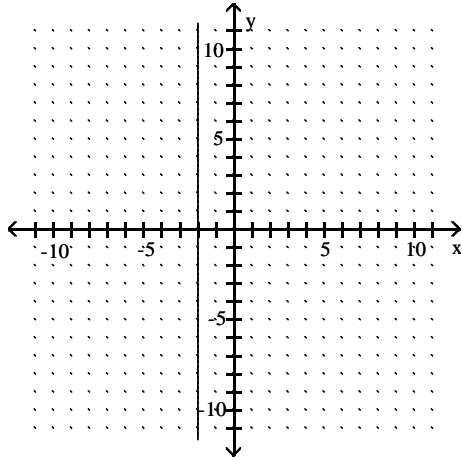
A) -2

B) 2

C) $\frac{1}{2}$

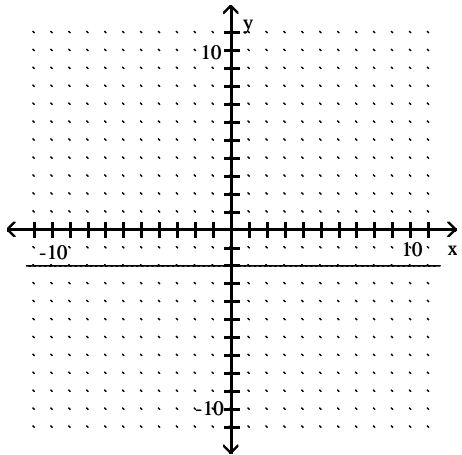
D) $-\frac{1}{2}$

13)



- A) $\frac{3}{2}$ B) 0
 C) -2 D) Undefined

14)



- A) 0 B) 2
 C) -2 D) Undefined

Decide whether the pair of lines is parallel, perpendicular, or neither.

15) The line through $(-20, 5)$ and $(-4, 7)$ and the line through $(-5, 5)$ and $(7, 4)$

- A) Parallel
 B) Neither
 C) Perpendicular

16) $9x + 3y = 12$ and $24x + 8y = 36$

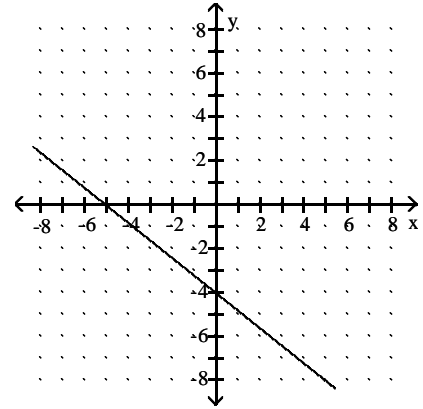
- A) Perpendicular
 B) Neither
 C) Parallel

Write the equation in slope-intercept form, state the slope and y-intercept, and graph the equation.

17) $4x - 5y = -20$

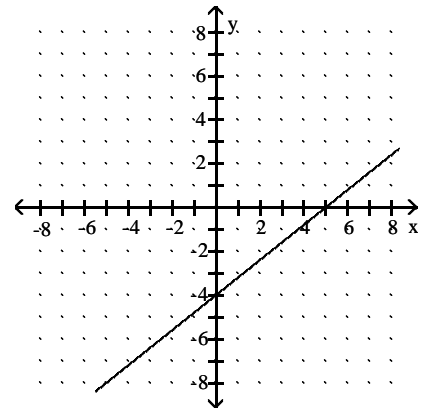
A) $y = -\frac{4}{5}x - 4$;

slope: $-\frac{4}{5}$, y-intercept $(0, -4)$



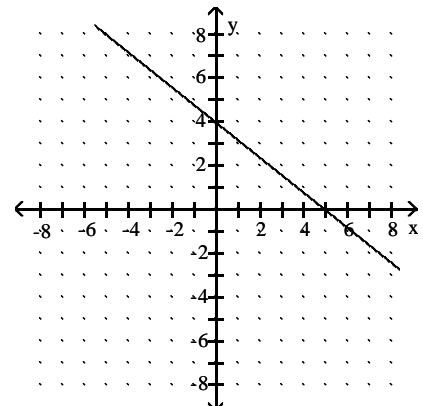
B) $y = \frac{4}{5}x - 4$;

slope: $\frac{4}{5}$, y-intercept $(0, -4)$



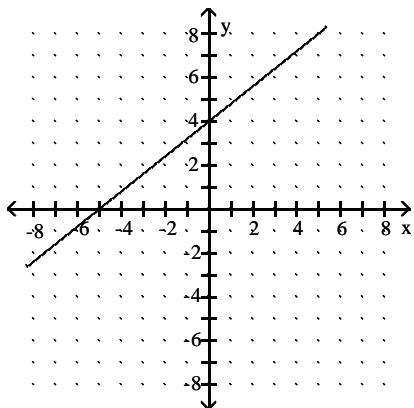
C) $y = -\frac{4}{5}x + 4$;

slope: $-\frac{4}{5}$, y-intercept $(0, 4)$



D) $y = \frac{4}{5}x + 4$;

slope: $\frac{4}{5}$, y-intercept (0, 4)



Find an equation of the line satisfying the conditions. Write the equation in slope-intercept form.

18) Through (-3, 8); perpendicular to $-3x + 4y = -23$

A) $y = -\frac{3}{4}x + \frac{23}{4}$

B) $y = \frac{3}{4}x + \frac{41}{4}$

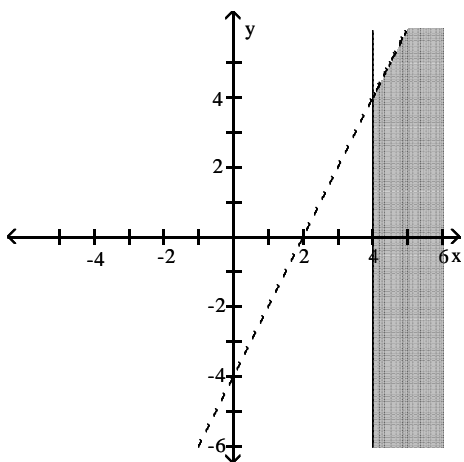
C) $y = -\frac{4}{3}x + 4$

D) $y = \frac{4}{3}x + 12$

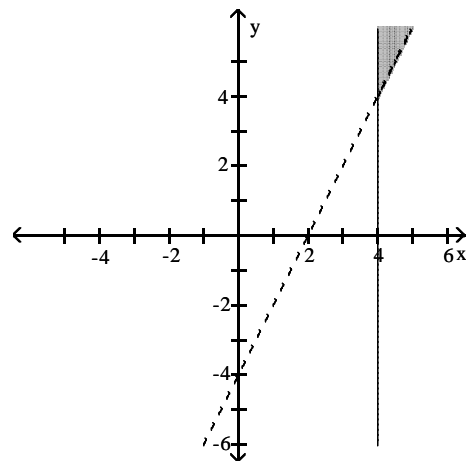
Graph the compound inequality.

19) $2x - y > 4$ and $x \leq 4$

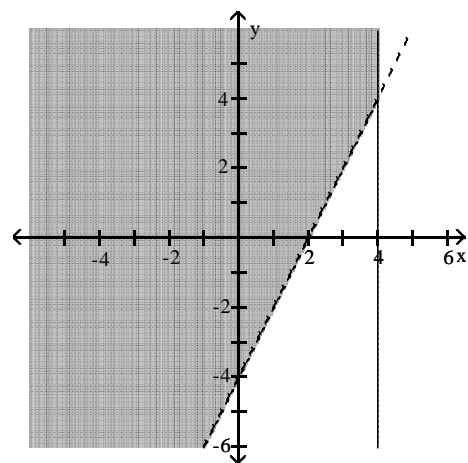
A)



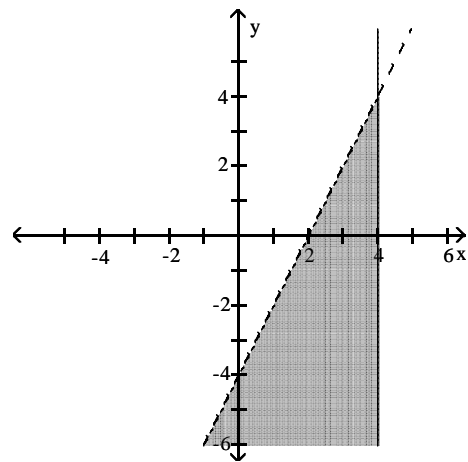
B)



C)

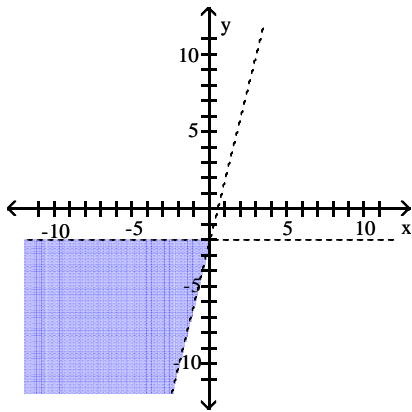


D)

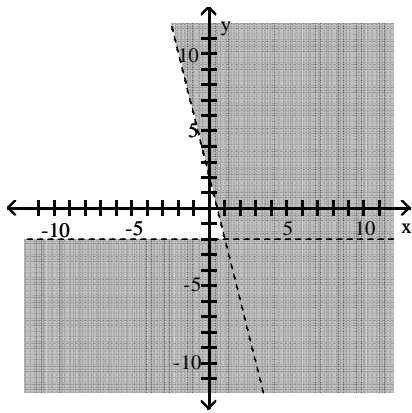


20) $4x < y + 2$ or $y < -2$

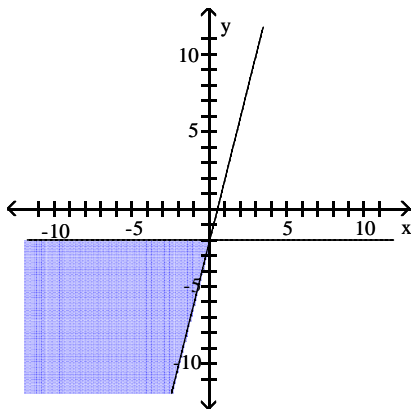
A)



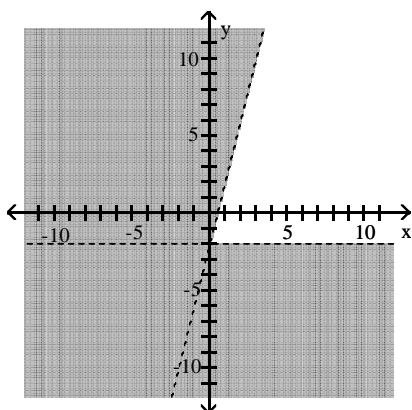
B)



C)



D)



Decide whether the relation is a function.

21) $\{(-4, -8), (-2, 9), (-1, -1), (-1, 7)\}$

A) Function

B) Not a function

Give the domain and range of the relation.

22) $\{(12, 6), (12, 5), (8, -5), (-7, 2), (4, -3)\}$

A) Domain: $\{5, -5, -3, 2, 6\}$; Range: $\{12, 12, 8, 4, -7\}$

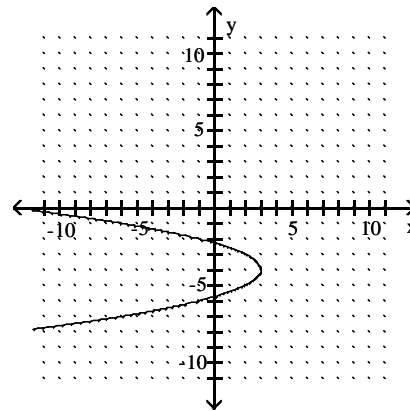
B) Domain: $\{12, -12, 8, 4, -7\}$; Range: $\{5, -5, -3, 2, 6\}$

C) Domain: $\{12, 12, 8, 4, -7\}$; Range: $\{5, -5, -3, 2, 6\}$

D) Domain: $\{12, 8, 4, -7\}$; Range: $\{5, -5, -3, 2, 6\}$

Decide whether the relation is a function, and give the domain and range.

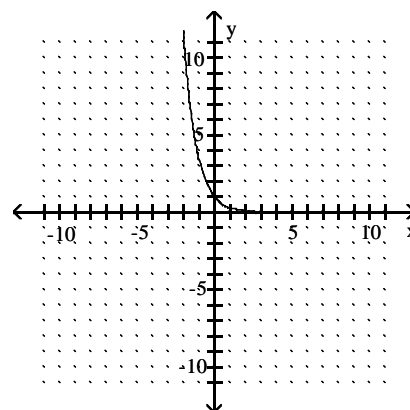
23)



A) Function; domain: $(-\infty, 3]$; range: $(-\infty, \infty)$

B) Not a function; domain: $(-\infty, 3]$; range: $(-\infty, \infty)$

24)



A) Not a function; domain: $(-\infty, \infty)$; range: $(0, \infty)$

B) Function; domain: $(-\infty, \infty)$; range: $(0, \infty)$

Solve the problem.

25) Find $f(-4)$ when $f(x) = x^2 - 2x + 6$.
A) 18 B) 14 C) 30 D) 2

26) Find $f(k)$ when $f(x) = 3x^2 + 4x + 5$
A) $3k^2 + 4k + 5$ B) $9k^2 + 16k + 25$
C) $3k^2 + 4k + 25$ D) $3k^2 + 16k + 5$

Decide whether the ordered pair is a solution of the given system.

27) $(-4, -2)$
 $3x + y = -10$
 $4x + 3y = -10$
A) Yes B) No

Solve the system by substitution.

28) $x + 7y = -2$
 $3x + y = 34$
A) $\{(-2, 3)\}$ B) $\{(3, 7)\}$
C) $\{(12, -2)\}$ D) $\{(7, 12)\}$

Solve the system by elimination. If the system is inconsistent or has dependent equations, say so.

29) $x + 7y = -30$
 $2x + 6y = -28$
A) Inconsistent: no solutions
B) $\{(2, -3)\}$
C) $\{(-3, -3)\}$
D) $\{(-2, -4)\}$

Apply the product rule for exponents, if possible.

30) $(-3x^4y)(-1x^4y^5)$
A) $-3x^8y^5$ B) $-1x^9y^6$
C) $3x^8y^6$ D) $3x^{16}y^7$

Evaluate the expression. Assume all variables represent nonzero numbers.

31) $9^0 + 4^0$
A) 0 B) 13 C) 1 D) 2

Apply the quotient rule for exponents, if applicable, and write the result using only positive exponents. Assume all variables represent nonzero numbers.

32) $\frac{x^{-6}}{x^{-17}}$
A) $\frac{1}{x^{11}}$ B) $\frac{1}{x^{23}}$
C) $-x^{11}$ D) x^{11}

Simplify the expression. Write your answer with only positive exponents. Assume that all variables represent nonzero real numbers.

33) $(-3x^4)^3$
A) $27x^7$ B) $-27x^7$
C) $27x^{12}$ D) $-27x^{12}$

Simplify the expression so that no negative exponents appear in the final result. Assume all variables represent nonzero numbers.

34) $\frac{11r^3(r^5)^3}{4(r^2)^4}$
A) $\frac{11}{4r^{10}}$ B) $\frac{11r^5}{4}$
C) $\frac{11r^{10}}{4}$ D) $\frac{11}{4r^5}$

Combine terms.

35) $q^3 - 10q^4 + 5q^2 + q^4 - 11q^3$
A) $-10q^4 + q^3 + 5q^2$
B) $-9q^8 - 10q^6 + 5q^2$
C) $9q^4 + 10q^3 - 5q^2$
D) $-9q^4 - 10q^3 + 5q^2$

Add or subtract as indicated.

36) $(-7x^4 + 2x^6 - 2 - 6x^5) - (6 - 4x^5 + 6x^6 - 3x^4)$
A) $8x^6 - 10x^5 - 10x^4 + 4$
B) $-4x^6 - 2x^5 - 4x^4 - 8$
C) $8x^6 - 10x^5 - 10x^4 - 8$
D) $-4x^6 - 10x^5 - 10x^4 + 4$

For the given polynomial function, find the requested value.

37) $f(x) = 6x^3 + 3x^2 + 30$; find $f(-2)$

- A) -18 B) -16 C) -6 D) -15

Find the product.

38) $2x(x^2 - 9x + 2)$

- A) $2x^3 - 9x^2 + 2x$ B) $2x^3 - 18x + 4$
C) $2x^2 - 18x + 4$ D) $2x^3 - 18x^2 + 4x$

39) $(-7y + 1)(-5y^2 - y + 5)$

- A) $35y^3 - 12y^2 - 36y + 5$
B) $35y^3 - 36y + 5$
C) $2y^2 - 36y + 5$
D) $35y^3 + 2y^2 - 36y + 5$

40) $(7x - 11y)^2$

- A) $7x^2 - 154xy + 121y^2$
B) $49x^2 + 121y^2$
C) $7x^2 + 121y^2$
D) $49x^2 - 154xy + 121y^2$

Divide.

41) $\frac{18x^7 - 21x^2 + 30x}{3x}$

- A) $6x^7 - 7x^2 + 10x$ B) $6x^6 - 7x + 10$
C) $6x^7 - 21x^2 + 30x$ D) $18x^6 - 21x + 30$

42) $\frac{y^2 + 16y + 64}{y + 8}$

- A) $y + \frac{8}{y + 8}$ B) $y + 8$
C) $y^2 + 8$ D) $y - 8$

43) Use long division to find

$(9z^4 - 6z^3 + 14z^2 + 6z + 7) \div (z^2 - z + 2)$

- A) $9z^2 - 3z + 1 + \frac{z - 9}{z^2 - z + 2}$
B) $9z^2 + 3z - 1 + \frac{-z + 9}{z^2 - z + 2}$
C) $9z^2 + 3z - 1$
D) $9z^2 + 3z - 1 + \frac{z - 9}{z^2 - z + 2}$

Factor out the greatest common factor.

44) $24x^8y^8 - 18x^2y^4 - 18x^5y^2$

- A) $6(4x^8y^8 - 3x^2y^4 - 3x^5y^2)$
B) $x^2y^2(24x^6y^6 - 18y^2 - 18x^3)$
C) $6x^2y^2(4x^6y^6 - 3y^2 - 3x^3)$
D) $6x^2(4x^6y^8 - 3y^4 - 3x^3y^2)$

45) $5m(2 - m) + 7n(2 - m)$

- A) $m(5 + 7n)(2 - m)$ B) $(5m - 7n)(2 - m)$
C) $(5m + 7n)(2 - m)$ D) $5(m + n)(2 - m)$

Factor by grouping.

46) $40r^2 + 45ry - 8xr - 9xy$

- A) $(8r + 9y)(x - 5r)$ B) $(8r + 9y)(5x - r)$
C) $(8r + 9y)(5r - x)$ D) $(9r + 8y)(5r - x)$

Factor the trinomial completely.

47) $y^2 + 5y - 66$

- A) $(y - 11)(y + 6)$ B) $(y + 11)(y - 6)$
C) $(y - 11)(y + 1)$ D) Prime

48) $12y^2 + 25y + 12$

- A) $(3y - 4)(4y - 3)$ B) $(3y + 4)(4y + 3)$
C) $(12y + 1)(y - 12)$ D) $(12y + 4)(y + 3)$

Factor the polynomial completely.

49) $36k^2 - 25m^2$

- A) $(6k + 5m)(6k - 5m)$
B) $(6k - 5m)^2$
C) $(36k + m)(k - 25m)$
D) $(6k + 5m)^2$

50) $m^2 + 10m + 25$

A) $(m - 5)^2$

B) $(m + 5)(m - 5)$

C) $(m + 5)^2$

D) Prime

51) $216x^3 + y^3$

A) $(6x + y)(36x^2 + y^2)$

B) $(6x - y)(36x^2 + 6xy + y^2)$

C) $(6x + y)(36x^2 - 6xy + y^2)$

D) $(216x + y)(x^2 - 6xy + y^2)$

52) $8a^3 - 27b^3$

A) $(2a + 3b^2)(4a^2 - 6ab + 9b^2)$

B) $(2a - 3b)(4a^2 + 6ab + 9b^2)$

C) $(2a - 3b)(4a^2 + 9b^2)$

D) $(2a + 3b)(4a^2 - 6ab + 9b^2)$

Find all solutions by factoring.

53) $2x^2 - 24x = -64$

A) $\{-8, -4\}$

B) $\{-8, 4\}$

C) $\{4, 8\}$

D) $\{8, 16\}$

54) $(x + 10)(x + 6) = -3$

A) $\{-9, -10\}$

B) $\{-7, -9\}$

C) $\{-10, -6\}$

D) $\{-6, -13\}$

Find all numbers not in the domain of the function.

55) $f(x) = \frac{x^2 - 64}{x^2 + 4x - 21}$

A) 8, -8

B) 7, -3

C) 0

D) -7, 3

Express the rational expression in lowest terms.

56) $\frac{y^2 + 6y - 27}{y^2 + 5y - 36}$

A) $\frac{6y - 3}{5y - 4}$

B) $\frac{y - 3}{y - 4}$

C) $\frac{6y - 27}{5y - 36}$

D) $-\frac{y^2 + 6y - 27}{y^2 + 5y - 36}$

Write the rational expression in lowest terms.

57) $\frac{m^2 - 9m}{9 - m}$

A) Already in lowest terms

B) $m + 3$

C) $-m$

D) m

Perform the indicated operation and express in lowest terms.

58) $\frac{k^2 + 9k + 14}{k^2 + 13k + 42} \cdot \frac{k^2 + 6k}{k^2 - 5k - 14}$

A) $\frac{k^2 + 6k}{k - 7}$

B) $\frac{k}{k^2 + 13k + 42}$

C) $\frac{1}{k - 7}$

D) $\frac{k}{k - 7}$

59) $\frac{z^2 + 14z + 49}{z^2 + 15z + 56} \div \frac{z^2 + 7z}{z^2 + 16z + 64}$

A) $z + 8$

B) $\frac{z + 8}{z}$

C) $\frac{z}{z^2 + 15z + 56}$

D) $\frac{z + 8}{z^2 + 8z}$

60) $\frac{3}{r} + \frac{4}{r + 2}$

A) $\frac{7r + 6}{r(r + 2)}$

B) $\frac{7r + 6}{r(-2 - r)}$

C) $\frac{-6r - 7}{r(r + 2)}$

D) $\frac{-6r - 7}{r(-2 - r)}$

61) $\frac{2}{5x - 5} - \frac{8}{5 - 5x}$

A) $\frac{-6}{5x - 5}$

B) $\frac{10}{5x - 5}$

C) $\frac{6}{5x - 5}$

D) $\frac{-10}{5x - 5}$

62) $\frac{x}{x - 6} + \frac{12}{x + 6} - \frac{72}{x^2 - 36}$

A) $\frac{x + 24}{x + 6}$

B) $\frac{x - 24}{x - 6}$

C) 1

D) $\frac{x + 24}{x^2 - 36}$

Simplify the complex fraction.

$$63) \frac{4 + \frac{2}{x}}{\frac{x}{4} + \frac{1}{8}}$$

- A) $\frac{16}{x}$ B) 1 C) $\frac{x}{16}$ D) 16

Solve the equation.

$$64) \frac{5}{5x} + \frac{1}{2x} = -\frac{1}{10}$$

- A) {-15} B) {15}
C) {-16} D) \emptyset

$$65) \frac{-6y - 93}{y^2 - 25} = \frac{-2y^2 - 18y - 3}{y^2 - 25} + \frac{2y + 2}{y - 5}$$

- A) $\left\{-5, 5, -\frac{2}{31}, 1\right\}$
B) {y | y is a real number }
C) {y | y \neq -5, y \neq 5 }
D) \emptyset

Solve the problem.

66) A formula for electric circuits is

$$\frac{1}{a} = \frac{1}{b} + \frac{1}{c}. \text{ If } a = 18 \text{ and } b = 19, \text{ find } c.$$

- A) 342.000 B) 1.056
C) 0.003 D) 0.947

Solve the formula for the specified variable.

$$67) \frac{PV}{T} = \frac{pV}{t} \text{ for } P$$

- A) $P = \frac{pvV}{tT}$ B) $P = \frac{pvT}{tV}$
C) $P = \frac{pv}{tTV}$ D) $P = \frac{tvT}{pV}$

$$68) S = 2\pi rh + 2\pi r^2 \text{ for } h$$

- A) $h = 2\pi(S - r)$ B) $h = hS - r$
C) $h = \frac{S}{2\pi r} - 1$ D) $h = \frac{S - 2\pi r^2}{2\pi r}$

Simplify the root.

$$69) \sqrt[4]{x^{28}}$$

- A) $-|x^7|$ B) x^7
C) $-x^7$ D) $|x^7|$

Simplify the expression involving rational exponents.

$$70) 125^{4/3}$$

- A) 78,125 B) 625
C) 15,625 D) 3125

$$71) \left(\frac{25}{81}\right)^{-1/2}$$

- A) $\frac{5}{9}$
B) $\frac{9}{5}$
C) $\frac{25}{162}$
D) Not a real number

Write with radicals. Assume that all variables represent positive real numbers.

$$72) (5m^4 + 4k^2)^{2/5}$$

- A) $\sqrt[5]{5m^4 + 4k^2}$ B) $\left(\sqrt[5]{5m + 4k}\right)^2$
C) $\left(\sqrt[2]{5m^4 + 4k^2}\right)^5$ D) $\left(\sqrt[5]{5m^4 + 4k^2}\right)^2$

Use the rules of exponents to simplify the expression. Write the answer with positive exponents. Assume that all variables represent positive real numbers.

$$73) (243k^5m^{-10})^{1/5}$$

- A) $5km^2$ B) $3km^2$
C) $\frac{5k}{m^2}$ D) $\frac{3k}{m^2}$

$$74) \frac{x^{1/2}}{x^{3/4} \cdot x^{-3}}$$

- A) $x^{17/4}$ B) $\frac{1}{x^{17/4}}$
C) $\frac{1}{x^{11/4}}$ D) $x^{11/4}$

Multiply using the product rule. Assume all variables represent positive real numbers.

75) $\sqrt[3]{25xy} \cdot \sqrt[3]{4xy}$
 A) $\sqrt[3]{29x^2y^2}$ B) $10xy$
 C) $\sqrt[3]{100x^2y^2}$ D) $7xy$

Express the radical in simplified form.

76) $\sqrt[4]{768}$
 A) 5 B) $3\sqrt[4]{4}$
 C) 27 D) $4\sqrt[4]{3}$

Express in simplified form. Assume that all variables represent positive real numbers.

77) $\sqrt{108x^2}$
 A) $6x\sqrt{3}$ B) $3x^2\sqrt{6}$
 C) $108x$ D) $6\sqrt{3x}$

78) $-\sqrt[3]{1000x^4y^5}$
 A) $-10xy\sqrt[3]{xy^2}$ B) $10xy\sqrt[2]{xy^2}$
 C) $-10xy\sqrt[3]{xy}$ D) $2xy\sqrt[3]{xy^2}$

Simplify the radical. Assume that all variables represent positive real numbers.

79) $\sqrt[10]{x^{31}}$
 A) $x^3 + \sqrt[10]{x}$ B) $x\sqrt[10]{x^3}$
 C) $x^3\sqrt[10]{x}$ D) $x\sqrt{x^3}$

Perform the indicated operations and simplify. Assume that all variables represent positive real numbers.

80) $-8\sqrt{6} + 6\sqrt{24}$
 A) $-2\sqrt{6}$ B) $10\sqrt{6}$
 C) $4\sqrt{6}$ D) $-4\sqrt{6}$

81) $\sqrt{6x} + 4\sqrt{216x} + 2\sqrt{24x}$
 A) $29\sqrt{6x}$ B) $6\sqrt{246x}$
 C) $7\sqrt{246x}$ D) $28\sqrt{6x}$

Simplify. Assume that all variables represent positive real numbers.

82) $3\sqrt[5]{x^6y} - 2x\sqrt[5]{xy}$
 A) $(3 - 2x)\sqrt[5]{xy}$
 B) $x\sqrt[5]{xy}$
 C) $2x\sqrt[5]{xy}$
 D) Cannot be simplified

83) $\frac{\sqrt{343}}{5} - \frac{4\sqrt{7}}{5} + \frac{\sqrt{7}}{\sqrt{25}}$
 A) $-\frac{\sqrt{336}}{5}$ B) $\frac{4\sqrt{7}}{25}$
 C) $\frac{4\sqrt{7}}{5}$ D) $\frac{6\sqrt{7}}{5}$

Multiply, then simplify the product. Assume that all variables represent positive real numbers.

84) $(3 + \sqrt{3})^2$
 A) $9 + 6\sqrt{3}$ B) $12 + 3\sqrt{3}$
 C) $6 + 6\sqrt{3}$ D) $12 + 6\sqrt{3}$

Rationalize the denominator. Assume that all variables represent positive real numbers.

85) $\sqrt{\frac{100}{3}}$
 A) $\frac{10\sqrt{3}}{3}$ B) $10\sqrt{3}$
 C) 19 D) $\frac{100\sqrt{3}}{3}$

Simplify. Assume that all variables represent positive real numbers.

86) $\sqrt[4]{\frac{16}{y}}$
 A) $\frac{2\sqrt[4]{y^3}}{y}$ B) $\frac{2\sqrt[4]{y^2}}{y}$
 C) $\frac{2\sqrt[4]{y}}{y}$ D) $\frac{2\sqrt[4]{y^3}}{y^2}$

Rationalize the denominator. Assume that all variables represent positive real numbers and that the denominator is not zero.

$$87) \frac{\sqrt{6}}{6\sqrt{7} - \sqrt{6}}$$

A) $\frac{\sqrt{42} + 1}{41}$

B) $\frac{\sqrt{42} + 1}{43}$

C) $\frac{\sqrt{42} - 1}{41}$

D) $\frac{\sqrt{7} + 1}{41}$

Write the expression in lowest terms. Assume that all variables represent positive real numbers.

$$88) \frac{30 - 48\sqrt{50}}{36}$$

A) $\frac{5 - 8\sqrt{50}}{6}$

B) $\frac{5 - 40\sqrt{2}}{6}$

C) $\frac{15 - 48\sqrt{50}}{6}$

D) $\frac{15 - 120\sqrt{2}}{12}$

Solve the equation.

$$89) \sqrt{4x - 3} - 6 = 0$$

A) {36}

B) \emptyset

C) $\left\{\frac{39}{4}\right\}$

D) $\left\{\frac{9}{4}\right\}$

Solve this equation.

$$90) \sqrt{x + 3} = x - 3$$

A) {6}

B) {1, 13}

C) {1, 6}

D) {6, 13}

Solve the equation.

$$91) \sqrt[3]{x + 5} = 4$$

A) {64}

B) {59}

C) {11}

D) {-1}

Write the number as a product of a real number and i . Simplify the radical expression.

$$92) \sqrt{-49}$$

A) $i\sqrt{7}$

B) $-7i$

C) $7i$

D) ± 7

$$93) -\sqrt{-212}$$

A) $2\sqrt{53}$

B) $-2i\sqrt{53}$

C) $-2\sqrt{53}$

D) $2i\sqrt{53}$

Multiply or divide as indicated.

$$94) \sqrt{-81} \cdot \sqrt{-64}$$

A) 72

B) $72i$

C) $-72i$

D) -72

$$95) \frac{\sqrt{-40}}{\sqrt{-10}}$$

A) -2

B) 2

C) $2i$

D) $-2i$

Add or subtract as indicated. Write your answers in standard form.

$$96) (7 - 4i) + (6 + 2i)$$

A) $1 + 6i$

B) $13 - 2i$

C) $13 + 2i$

D) $-13 + 2i$

$$97) (4 + 6i) - (-5 + i)$$

A) $-9 - 5i$

B) $-1 + 7i$

C) $9 - 5i$

D) $9 + 5i$

Multiply.

$$98) (6 + 2i)(3 - 7i)$$

A) $32 - 36i$

B) $4 + 48i$

C) $32 + 36i$

D) $-14i^2 - 36i + 18$

Use the square root property to solve the given equation.

$$99) -2k^2 + 18 = 0$$

A) {6, -6}

B) {3}

C) {3, -3}

D) {-11.5}

$$100) (p + 8)^2 = 11$$

A) $\{\sqrt{11} - \sqrt{8}\}$

B) $\{-8 + \sqrt{11}, -8 - \sqrt{11}\}$

C) $\{-8 + \sqrt{11}\}$

D) $\{\sqrt{11} + 8, -\sqrt{11} + 8\}$

Find the imaginary solutions of the given equation.

101) $4x^2 - 3x + 4 = 0$

- A) $\left\{ \frac{3 + i\sqrt{55}}{8}, \frac{3 - i\sqrt{55}}{8} \right\}$
B) $\left\{ \frac{3 + \sqrt{55}}{8}, \frac{3 - \sqrt{55}}{8} \right\}$
C) $\left\{ \frac{-3 + \sqrt{55}}{8}, \frac{-3 - \sqrt{55}}{8} \right\}$
D) $\left\{ \frac{-3 + i\sqrt{55}}{8}, \frac{-3 - i\sqrt{55}}{8} \right\}$

Use the quadratic formula to solve the given equation.

(Solutions are real numbers.)

102) $3n^2 = -8n - 2$

- A) $\left\{ \frac{-8 + \sqrt{10}}{3}, \frac{-8 - \sqrt{10}}{3} \right\}$
B) $\left\{ \frac{-4 + \sqrt{10}}{3}, \frac{-4 - \sqrt{10}}{3} \right\}$
C) $\left\{ \frac{-4 + \sqrt{10}}{6}, \frac{-4 - \sqrt{10}}{6} \right\}$
D) $\left\{ \frac{-4 + \sqrt{22}}{3}, \frac{-4 - \sqrt{22}}{3} \right\}$

Answer Key

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- | | |
|-------|--------|
| 1) A | 54) B |
| 2) C | 55) D |
| 3) A | 56) B |
| 4) A | 57) C |
| 5) A | 58) D |
| 6) A | 59) B |
| 7) C | 60) A |
| 8) D | 61) B |
| 9) D | 62) A |
| 10) A | 63) A |
| 11) B | 64) A |
| 12) B | 65) D |
| 13) D | 66) A |
| 14) A | 67) B |
| 15) B | 68) D |
| 16) C | 69) D |
| 17) D | 70) B |
| 18) C | 71) B |
| 19) D | 72) D |
| 20) D | 73) D |
| 21) B | 74) D |
| 22) D | 75) C |
| 23) B | 76) D |
| 24) B | 77) A |
| 25) C | 78) A |
| 26) A | 79) C |
| 27) B | 80) C |
| 28) C | 81) A |
| 29) D | 82) B |
| 30) C | 83) C |
| 31) D | 84) D |
| 32) D | 85) A |
| 33) D | 86) A |
| 34) C | 87) A |
| 35) D | 88) B |
| 36) B | 89) C |
| 37) C | 90) A |
| 38) D | 91) B |
| 39) D | 92) C |
| 40) D | 93) B |
| 41) B | 94) D |
| 42) B | 95) B |
| 43) B | 96) B |
| 44) C | 97) D |
| 45) C | 98) A |
| 46) C | 99) C |
| 47) B | 100) B |
| 48) B | 101) A |
| 49) A | 102) B |
| 50) C | |
| 51) C | |
| 52) B | |
| 53) C | |