Exam final exam review 180 plus 234 TSI questions for intermediate algebra m032000 013014 NEW

Name_____

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interactmath sections developmental mathematics sullivan 1e

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Multiply.

1) −16(3) 1) _____
A) −48 B) −32 C) −51 D) 32

Answer: A
Objective: (2.4) Multiply Integers
final001 interactmath 2.3 #27

2) −8(−8) 2) _____
A) 64 B) −72 C) 72 D) −64

Answer: A
Objective: (2.4) Multiply Integers
final002 interactmath 2.3 #35

Divide, if possible. If a quotient is undefined, state so.

3) $\frac{-18}{3}$ 3) _____
A) −7 B) −6 C) −5 D) 6

Answer: B
Objective: (2.4) Divide Integers
final003 interactmath 2.3 #51

4) $\frac{-14}{-2}$ 4) _____
A) −8 B) 7 C) −7 D) −6

Answer: B
Objective: (2.4) Divide Integers
final004 interactmath 2.3 #53

Find the mean for the list of numbers.

5) Ages of patients (in years) in a clinic: 18, 2, 29, 18 5) _____
Round answer to the nearest whole number if necessary.
A) 18 years B) 17 years C) 16 years D) 2 year(s)

Answer: B
Objective: (7.3) Find the Mean of a Set of Numbers
final005 interactmath 7.2 quick check 7.2.4

6) Monthly checking account fees: $17, $10, $6, $11, $6, $4, $4 6) _____
Round answer to the nearest whole number if necessary.
A) $11 B) $4 C) $8 D) $7

Answer: C
Objective: (7.3) Find the Mean of a Set of Numbers
final006 interactmath 7.2 quick check 7.2.5

7) Annual sales bonuses: $1450, $4460, $6940, $7240, $1880, $6250 7) _____
Round answer to the nearest whole number if necessary.
A) $7240 B) $6940 C) $4703 D) $4702

Answer: C
Objective: (7.3) Find the Mean of a Set of Numbers
final007 interactmath 7.2 quick check 7.2.6

Find the median for the data given.

8) Number of steaks served: 2, 10, 18, 24, 43, 44, 49 8) _____
A) 27 steaks B) 43 steaks C) 24 steaks D) 18 steaks

Answer: C
Objective: (7.3) Find the Median of a Set of Numbers
fnal008 interactmath 7.2 quick check 7.7.6

Determine whether the ordered pair satisfies the equation.

9) $5x + 2y = 26$; (4, 3) 9) _____
A) Yes B) No

Answer: A
Objective: (7.4) Determine Whether an Ordered Pair Satisfies an Equation in Two Variables
final009 interactmath 7.3 #33

Determine if the given value is a solution to the equation. Answer Yes or No.

10) $8x - 10 = 15$; $x = 3$ 10) _____
A) No B) Yes

Answer: A
Objective: (8.2) Determine If a Number Is a Solution of an Equation
final010 interactmath 8.1 #25

Solve the equation using the Multiplication Property of Equality.

11) $-2x = -12$ 11) _____
A) {6} B) {−10} C) {2} D) {10}

Answer: A
Objective: (8.2) Use the Multiplication Property of Equality to Solve Linear Equations
final011 interactmath 8.1 quick check 8.1.16

Solve the equation. Check your solution.

12) $3r + 6 = 30$ 12) _____
A) {25} B) {21} C) {8} D) {4}

Answer: C
Objective: (8.3) Apply the Addition and the Multiplication Properties of Equality to Solve Linear Equations
final012 interactmath 8.2 #23

13) $43 = -6x - 5$ 13) _____
A) {2} B) {58} C) {54} D) {−8}

Answer: D
Objective: (8.3) Apply the Addition and the Multiplication Properties of Equality to Solve Linear Equations
final013 interactmath 8.2 #25

14) $-7x - 11 + 8x = -4$ 14) _____
A) {15} B) {7} C) {−15} D) {−7}

Answer: B
Objective: (8.3) Combine Like Terms and Apply the Distributive Property to Solve Linear Equations
final014 interactmath 8.2 #35

15) $5x - (2x - 1) = 2$ 15) _____

A) $\left\{-\frac{1}{3}\right\}$ B) $\left\{-\frac{1}{7}\right\}$ C) $\left\{\frac{1}{3}\right\}$ D) $\left\{\frac{1}{7}\right\}$

Answer: C

Objective: (8.3) Combine Like Terms and Apply the Distributive Property to Solve Linear Equations

final015 interactmath 8.2 #39

16) $-7x - 7 = 1 + 9x$ 16) _____

A) $\left\{-\frac{1}{3}\right\}$ B) $\{-2\}$ C) $\{2\}$ D) $\left\{-\frac{1}{2}\right\}$

Answer: D

Objective: (8.3) Solve a Linear Equation with the Variable on Both Sides of the Equation

final016 interactmath 8.2 #51

17) $3x - 8 = 4(x + 1)$ 17) _____

A) {12} B) {–4} C) {–12} D) {4}

Answer: C

Objective: (8.3) Solve a Linear Equation with the Variable on Both Sides of the Equation

final017 interactmath 8.2 #53

18) $\frac{5x}{2} + 3 = \frac{1}{7}$ 18) _____

A) $\left\{\frac{2}{5}\right\}$ B) $\left\{-\frac{8}{7}\right\}$ C) $\left\{-\frac{41}{35}\right\}$ D) $\left\{\frac{33}{35}\right\}$

Answer: B

Objective: (8.4) Use the Least Common Denominator to Solve a Linear Equation Containing Fractions

final018 interactmath 8.3 #29

19) $\frac{13}{10}x + \frac{6}{5} = \frac{6}{5}x$ 19) _____

A) {12} B) {24} C) {–24} D) {–12}

Answer: D

Objective: (8.4) Use the Least Common Denominator to Solve a Linear Equation Containing Fractions

final019 interactmath 8.3 #35

20) $\frac{r + 6}{5} = \frac{r + 8}{7}$ 20) _____

A) {1} B) {–2} C) {–1} D) {2}

Answer: C

Objective: (8.4) Use the Least Common Denominator to Solve a Linear Equation Containing Fractions

final020 interactmath 8.3 #31

21) $-46.8 = -5.2x$ 21) _____

A) {2} B) {9} C) {–41.6} D) {41.6}

Answer: B

Objective: (8.4) Solve a Linear Equation Containing Decimals

final021 interactmath 8.3 #43

22) $x + 7.1x = 234.9$ 22) _____

A) {2.9} B) {30} C) {36.1} D) {29}

Answer: D

Objective: (8.4) Solve a Linear Equation Containing Decimals

final022 interactmath 8.3 #51

23) $-0.03(30) + 0.50x = 0.30(30 + x)$ 23) _____

A) {25} B) {40} C) {60} D) {50}

Answer: D
Objective: (8.4) Solve a Linear Equation Containing Decimals
final023 interactmath 8.3 #57

Solve the equation. State whether the equation is a contradiction, an identity, or a conditional equation.

24) $-7x + 5 + 5x = -2x + 10$ 24) _____

A) ∅ or { }; contradiction B) {−5}; conditional equation
C) {5}; conditional equation D) all real numbers; identity

Answer: A
Objective: (8.4) Classify a Linear Equation as an Identity, Conditional, or a Contradiction
final024 interactmath 8.3 #63

25) $2(x + 3) = (2x + 6)$ 25) _____

A) ∅ or { }; contradiction B) {0}; conditional equation
C) all real numbers; identity D) {12}; conditional equation

Answer: C
Objective: (8.4) Classify a Linear Equation as an Identity, Conditional, or a Contradiction
final025 interactmath 8.3 #65

26) $\frac{x}{2} + \frac{1}{6} = \frac{6x + 2}{12}$ 26) _____

A) $\left\{\frac{1}{3}\right\}$; conditional equation B) all real numbers; identity
C) $\left\{-\frac{1}{3}\right\}$; conditional equation D) ∅ or { }; contradiction

Answer: B
Objective: (8.4) Classify a Linear Equation as an Identity, Conditional, or a Contradiction
final026 interactmath 8.3 #65

Substitute the given values into the formula and then evaluate to find the unknown quantity. Label units in your answer. If the answer is not exact, round your answer to the nearest hundredth.

27) $P = 2L + 2W$; $P = 28$, $W = 9$ 27) _____

A) 14 units B) 5 units C) 9.5 units D) 19 units

Answer: B
Objective: (8.5) Evaluate a Formula
final027 interactmath 8.4 #35

28) $V = \frac{1}{3}Bh$; $V = 48$, $h = 8$ 28) _____

A) 18 units B) 6 units C) 384 units D) 56 units

Answer: A
Objective: (8.5) Evaluate a Formula
final028 interactmath 8.4 #77

29) $I = prt$; $I = 44.8$, $p = 160$, $r = 0.04$ 29) _____

A) 286.72 units B) 0.7 units C) 2.8672 units D) 7 units

Answer: D
Objective: (8.5) Evaluate a Formula
final029 interactmath 8.4 #67

30) Use the formula $C = \frac{5}{9}(F - 32)$ to convert 167° F to degrees Celsius. 30) _____

A) 110.6° C B) 60.8° C C) 332.6° C D) 75° C

Answer: D
Objective: (8.5) Evaluate a Formula
final030 interactmath8.4 #29

Solve the problem.

31) You have a cylindrical cooking pot whose radius is 6 inches and whose height is 7 inches. How many full cans of soup will fit into the pot if each can has holds 10 cubic inches of soup? Use the formula $V = \pi r^2 h$ and 3.14 as an approximation for π. 31) _____

A) 79 cans of soup B) 26 cans of soup C) 25 cans of soup D) 80 cans of soup

Answer: A
Objective: (8.5) Evaluate a Formula
final031 interactmath 8.4 #75

32) The area of a circle with radius r is given by the formula $A = \pi r^2$. Find the area of a circle with radius 7 centimeters. Use 3.14 for π. 32) _____

A) 153.86 cm^2 B) 10.14 cm^2 C) 69.02 cm^2 D) 21.98 cm^2

Answer: A
Objective: (8.5) Evaluate a Formula
final032 interactmath 8.4 #39b

Solve the formula for the stated variable.

33) $C = 2\pi r$; solve for r 33) _____

A) $r = \frac{C}{2\pi}$ B) $r = 2C\pi$ C) $r = \frac{2\pi}{C}$ D) $r = \frac{C\pi}{2}$

Answer: A
Objective: (8.5) Solve a Formula for a Variable
final033 interactmath 8.4 #47

34) $A = lw$; solve for w 34) _____

A) $w = \frac{l}{A}$ B) $w = \frac{A}{l}$ C) $w = A - l$ D) $w = Al$

Answer: B
Objective: (8.5) Solve a Formula for a Variable
final034 interactmath 8.4 #43

35) $I = Prt$; solve for r 35) _____

A) $r = \frac{P - 1}{It}$ B) $r = \frac{P - I}{1 + t}$ C) $r = \frac{I}{Pt}$ D) $r = P - It$

Answer: C
Objective: (8.5) Solve a Formula for a Variable
final035 interactmath 8.4 #45

36) $V = \frac{1}{3}Ah$; solve for h 36) _____

A) $h = \frac{3A}{V}$ B) $h = \frac{A}{3V}$ C) $h = \frac{V}{3A}$ D) $h = \frac{3V}{A}$

Answer: D
Objective: (8.5) Solve a Formula for a Variable
final036 interactmath 8.4 #49

37) $P = a + b + c$; solve for c 37) _____

A) $c = a + b - P$ B) $c = P + a + b$ C) $c = P - a - b$ D) $c = P + a - b$

Answer: C
Objective: (8.5) Solve a Formula for a Variable
final037 interactmath 8.4 #51

38) $A = P + PRT$; solve for R 38) _____

A) $R = \frac{A - P}{PT}$ B) $R = \frac{P - A}{PT}$ C) $R = \frac{PT}{A - P}$ D) $R = \frac{A}{T}$

Answer: A
Objective: (8.5) Solve a Formula for a Variable
final038 interactmath 8.4 #53

39) $A = \frac{1}{2}h(B + b)$; solve for B 39) _____

A) $B = \frac{2A - bh}{h}$ B) $B = \frac{2A + bh}{h}$ C) $B = 2A - bh$ D) $B = \frac{A - bh}{h}$

Answer: A
Objective: (8.5) Solve a Formula for a Variable
final039 interactmath 8.4 #55

Solve for y.

40) $4x - 5y = 2$ 40) _____

A) $y = \frac{4x - 2}{5}$ B) $y = 4x - 2$ C) $y = \frac{4x + 2}{5}$ D) $y = \frac{2 - 4x}{5}$

Answer: A
Objective: (8.5) Solve a Formula for a Variable
final040 interactmath 8.4 #61

41) $14x + 9y = 10$ 41) _____

A) $y = \frac{10 - 14x}{9}$ B) $y = \frac{14}{9}x - \frac{10}{9}$ C) $y = \frac{14x - 10}{9}$ D) $y = \frac{14x + 10}{9}$

Answer: A
Objective: (8.5) Solve a Formula for a Variable
final041 interactmath 8.4 #61

Solve the problem.

42) The sum of a number and three is negative eleven. Find the number. 42) _____

A) 14 B) –14 C) –8 D) 0

Answer: B
Objective: (8.6) Build Models for Solving Direct Translation Problems
final042 interactmath 8.5 #61

43) Six times a number, added to 18, is 36. Find the number. 43) _____

A) 18 B) 108 C) 3 D) –3

Answer: C
Objective: (8.6) Build Models for Solving Direct Translation Problems
final043 interactmath 8.5 #63

44) 2 times a number less than 7 times the same number is 35. Find the number. 44) _____

A) 5 B) –7 C) 7 D) 2.4

Answer: C
Objective: (8.6) Build Models for Solving Direct Translation Problems
final044 interactmath 8.5 #75

Find the unknown in each percent question.

45) What is 10% of 400? 45) _____

A) 0.4 B) 400 C) 40 D) 4

Answer: C
Objective: (8.7) Solve Direct Translation Problems Involving Percent
final045

Solve the problem.

46) 11% of students at a university attended a lecture. If 4000 students are enrolled at the university, about how many students attended the lecture? 46) _____

A) 44 students B) 44,000 students C) 440 students D) 4400 students

Answer: C
Objective: (8.7) Solve Direct Translation Problems Involving Percent
final046

47) Logan bought stocks and later sold them for $823,900, making a profit of 7%. How much did he pay for the stocks? 47) _____

A) $53,900 B) $57,673 C) $770,000 D) $847,000,000

Answer: C
Objective: (8.7) Model and Solve Direct Translation Problems from Business Involving Percent
final047

48) After receiving a discount of 7.5% on its bulk order of typewriter ribbons, John's Office Supply pays $4810. What was the price of the order before the discount? Round to the nearest dollar if necessary. 48) _____

A) $4449 B) $5200 C) $4690 D) $5171

Answer: B
Objective: (8.7) Model and Solve Direct Translation Problems from Business Involving Percent
final048

49) Find two complementary angles such that the measure of the first angle is x°, and the measure of the second angle is (3x – 2)°. 49) _____

A) 1st angle = 22°; 2nd angle = 64° B) 1st angle = 22°; 2nd angle = 68°
C) 1st angle = 23°; 2nd angle = 67° D) 1st angle = 31°; 2nd angle = 59°

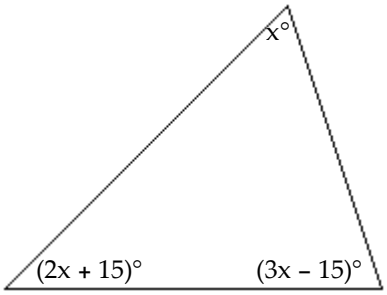
Answer: C
Objective: (8.8) Set Up and Solve Complementary and Supplementary Angle Problems
final049

50) Find two supplementary angles such that the first angle is 30° more than 5 times the second. 50) _____

A) 25°; 155° B) 10°; 80° C) 30°; 150° D) 155°; 25°

Answer: D
Objective: (8.8) Set Up and Solve Complementary and Supplementary Angle Problems
final050

51) Find the measure of each angle of the triangle. 51) _____



A) 90°, 60°, 30° B) 45°, 82.5°, 52.5° C) 30°, 75°, 75° D) 60°, 75°, 45°

Answer: C
Objective: (8.8) Set Up and Solve Angles of a Triangle Problems
final051

52) A rectangular carpet has a perimeter of 198 inches. The length of the carpet is 61 inches more than the width. What are the dimensions of the carpet? 52) _____

A) 80 by 99 inches B) 59 by 78 inches
C) 89.5 by 99 inches D) 80 by 19 inches

Answer: D
Objective: (8.8) Use Geometry Formulas to Solve Problems
final052

53) A motorcycle traveling at 50 miles per hour overtakes a car traveling at 30 miles per hour that had a three–hour head start. How far from the starting point are the two vehicles? 53) _____

A) 225 miles B) 56.3 miles C) 7.5 miles D) 4.5 miles

Answer: A
Objective: (8.8) Set Up and Solve Uniform Motion Problems
final053

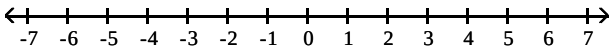
54) Two cars start from the same point and travel in the same direction. If one car is traveling 60 miles per hour and the other car is traveling at 56 miles per hour, how far apart will they be after 8 hours? 54) _____

A) 928 miles B) 480 miles C) 32 miles D) 448 miles

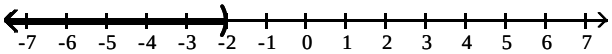
Answer: C
Objective: (8.8) Set Up and Solve Uniform Motion Problems
final054

Graph the inequality on a number line, and write the inequality in interval notation.

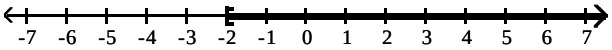
55) $x > -2$ 55) _____



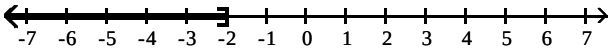
A) $(-\infty, -2)$



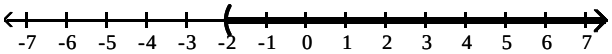
B) $[-2, \infty)$



C) $(-\infty, -2]$

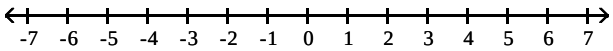


D) $(-2, \infty)$

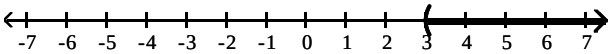


Answer: D
Objective: (8.9) Graph Inequalities on the Real Number Line
final055 interactmath 8.8 #37

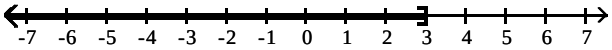
56) $x \geq 3$ 56) _____



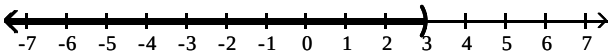
A) $(3, \infty)$



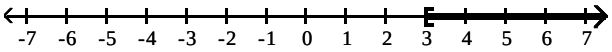
B) $(-\infty, 3]$



C) $(-\infty, 3)$



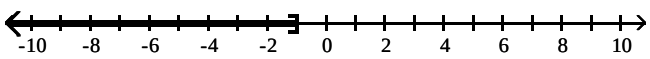
D) $[3, \infty)$



Answer: D
Objective: (8.9) Graph Inequalities on the Real Number Line
final056 interactmath 8.8 #41

Use interval notation to express the inequality shown in the graph.

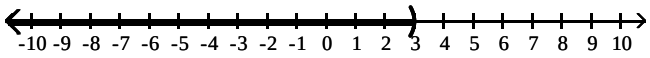
57) 57) _____



A) $(-\infty, -1]$ B) $(-1, \infty)$ C) $[-1, \infty)$ D) $(-\infty, -1)$

Answer: A
Objective: (8.9) Use Interval Notation
final057 interactmath 8.8 #45

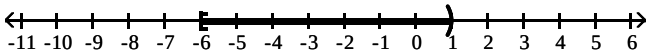
58) 58) _____



A) (3, ∞) B) (−∞, 3] C) [3, ∞) D) (−∞, 3)

Answer: D
Objective: (8.9) Use Interval Notation
final058 interactmath 8.8 #45

59) 59) _____

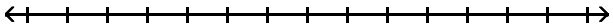


A) [−6, 1) B) (−6, 1) C) (−6, 1] D) [−6, 1]

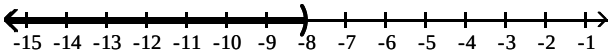
Answer: A
Objective: (8.9) Use Interval Notation
final059

Solve the inequality and express the solution set in interval notation. Graph the solution set on the real number line.

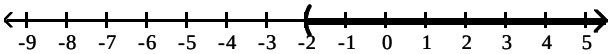
60) x − 3 < −5 60) _____



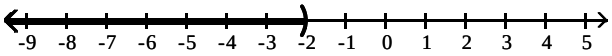
A) (−∞, −8)



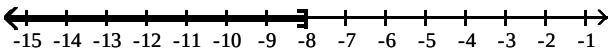
B) (−2, ∞)



C) (−∞, −2)

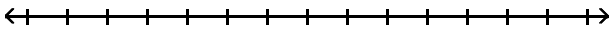


D) (−∞, −8]

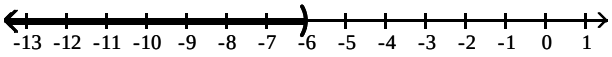


Answer: C
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final060 interactmath 8.8 quick check 8.8.14

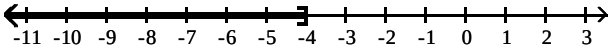
61) $x - 1 \leq -5$ 61) _____



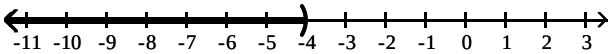
A) $(-\infty, -6)$



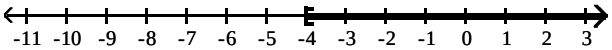
B) $(-\infty, -4]$



C) $(-\infty, -4)$

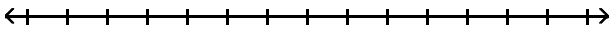


D) $[-4, \infty)$

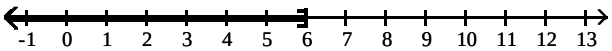


Answer: B
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final061 interactmath 8.8 quick check 8.8.14

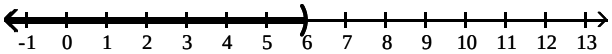
62) $x + 5 < 1$ 62) _____



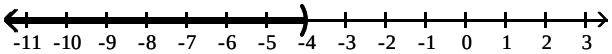
A) $(-\infty, 6]$



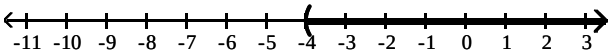
B) $(-\infty, 6)$



C) $(-\infty, -4)$

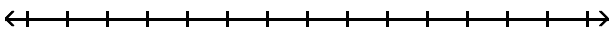


D) $(-4, \infty)$

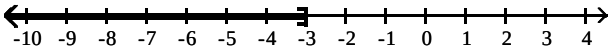


Answer: C
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final062 interactmath 8.8 quickcheck 8.8.14

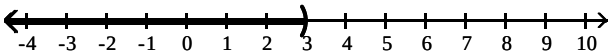
63) $7x \geq -21$ 63) _____



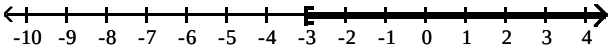
A) $(-\infty, -3]$



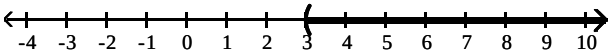
B) $(-\infty, 3)$



C) $[-3, \infty)$

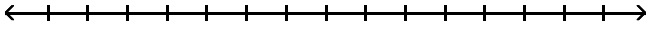


D) $(3, \infty)$

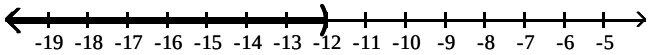


Answer: C
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final063 interactmath 8.8 #63

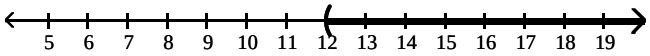
64) $-3x > 36$ 64) _____



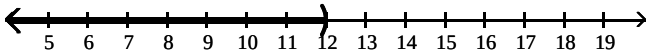
A) $(-\infty, -12)$



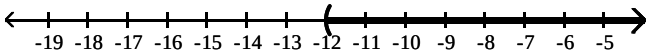
B) $(12, \infty)$



C) $(-\infty, 12)$

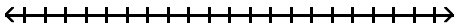


D) $(-12, \infty)$

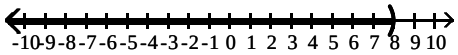


Answer: A
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final064 interactmath 8.8 #57

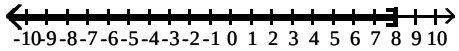
65) $2x + 6 < 22$ 65) _____



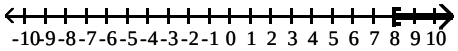
A) $(-\infty, 8)$



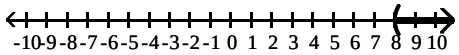
B) $(-\infty, 8]$



C) $[8, \infty)$

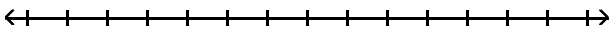


D) $(8, \infty)$

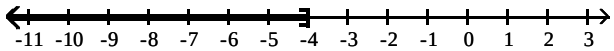


Answer: A
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final065 interactmath 8.8 #67

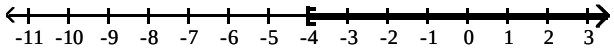
66) $6x + 3 > 5x - 1$ 66) _____



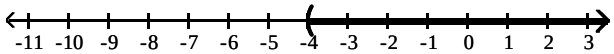
A) $(-\infty, -4]$



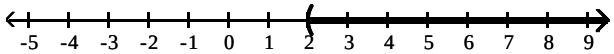
B) $[-4, \infty)$



C) $(-4, \infty)$

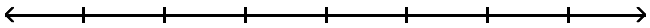


D) $(2, \infty)$

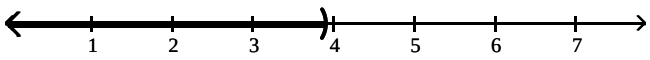


Answer: C
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final066 interactmath 8.8 #69, quickcheck 8.8.15

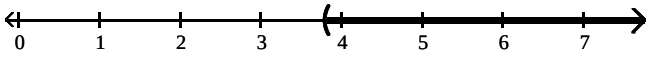
67) $1.4x - 3.8 > 0.7x - 1.07$ 67) _____



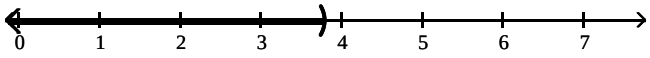
A) $(-\infty, 3.9)$



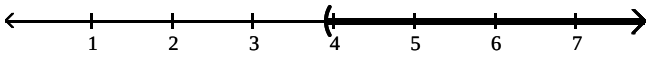
B) $(3.8, \infty)$



C) $(-\infty, 3.8)$

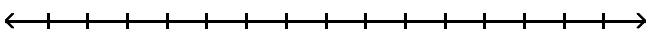


D) $(3.9, \infty)$

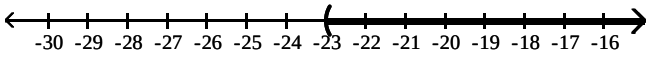


Answer: D
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final067 interactmath 8.8 #115

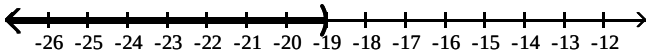
68) $6x - 2 < 7(x - 3)$ 68) _____



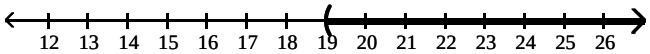
A) $(-23, \infty)$



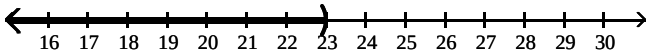
B) $(-\infty, -19)$



C) $(19, \infty)$

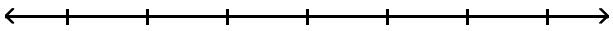


D) $(-\infty, 23)$

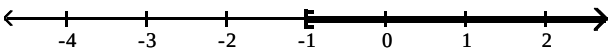


Answer: C
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final068 interactmath 8.8 #75, quickcheck 8.8.17

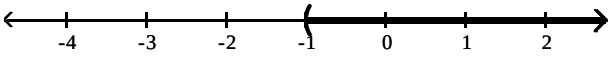
69) $35x + 35 > 5(6x + 6)$ 69) _____



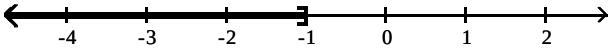
A) $[-1, \infty)$



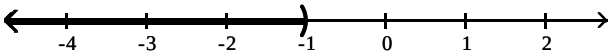
B) $(-1, \infty)$



C) $(-\infty, -1]$

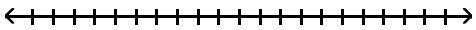


D) $(-\infty, -1)$

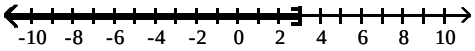


Answer: B
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final069 8.8 #105

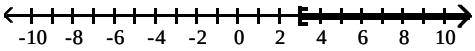
70) $5 - 3(1 - x) \leq 11$ 70) _____



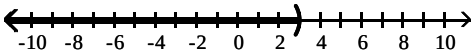
A) $(-\infty, 3]$



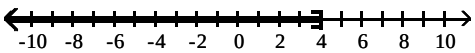
B) $[3, \infty)$



C) $(-\infty, 3)$



D) $(-\infty, 4]$



Answer: A
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality
final070 interactmath 8.8 #75

Decide whether or not the ordered pair is a solution to the equation.

71) $4x + 2y = 16$; (2, 4) 71) _____

A) Yes B) No

Answer: A
Objective: (9.2) Determine If an Ordered Pair Satisfies an Equation
final071 interactmath 9.1 #29

72) $3x - 5y = 35$; (5, 4) 72) _____

A) Yes B) No

Answer: B
Objective: (9.2) Determine If an Ordered Pair Satisfies an Equation
final072 interactmath 9.1 #29

Solve the problem.

73) Find an ordered pair that satisfies the equation $y = -x + 9$ by letting $x = 5$. 73) _____

A) (4, 5) B) (5, 5) C) (4, 4) D) (5, 4)

Answer: D
Objective: (9.2) Determine If an Ordered Pair Satisfies an Equation
final073 interactmath 9.1 #33

74) Find an ordered pair that satisfies the equation $4x + y = -34$ by letting $x = -9$. 74) _____

A) (–9, –9) B) (–9, 2) C) (–9, –38) D) (2, –9)

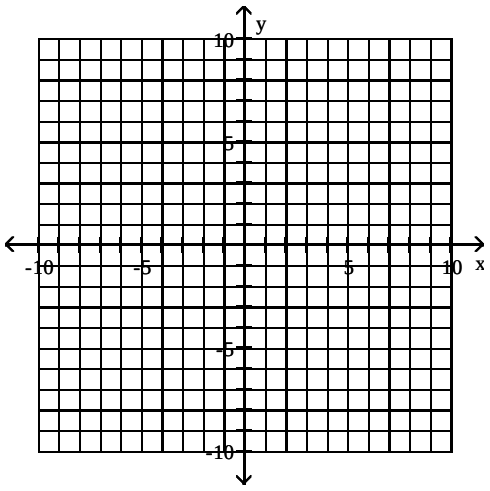
Answer: B

Objective: (9.2) Determine If an Ordered Pair Satisfies an Equation

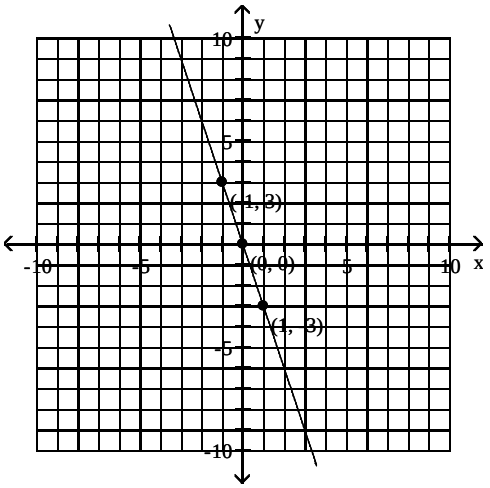
final074 interactmath 9.1 #35

Graph the linear equation using the point–plotting method.

75) $y = 2x - 3$ 75) _____



A)



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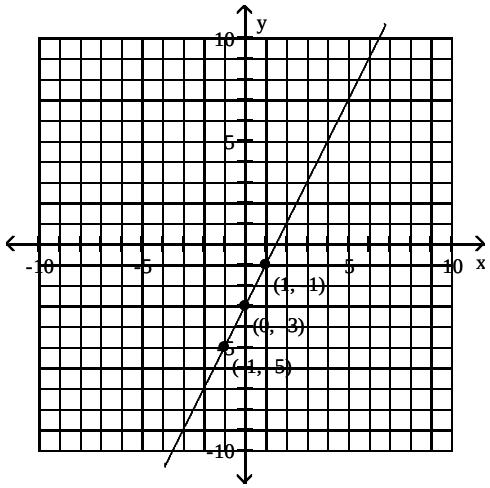
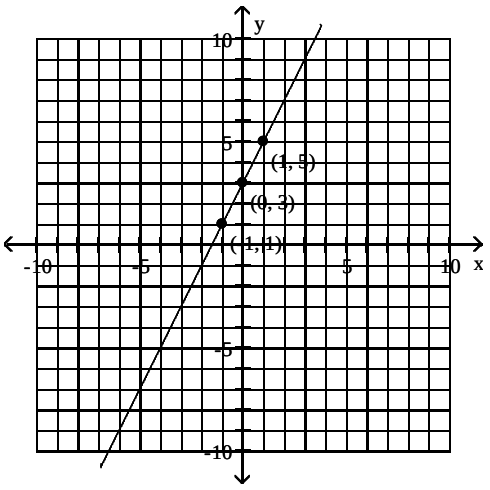


C)



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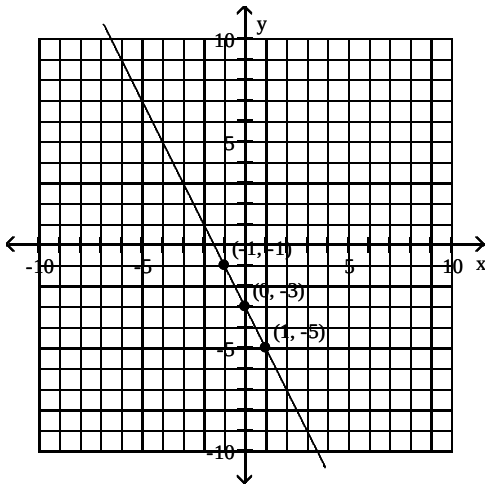
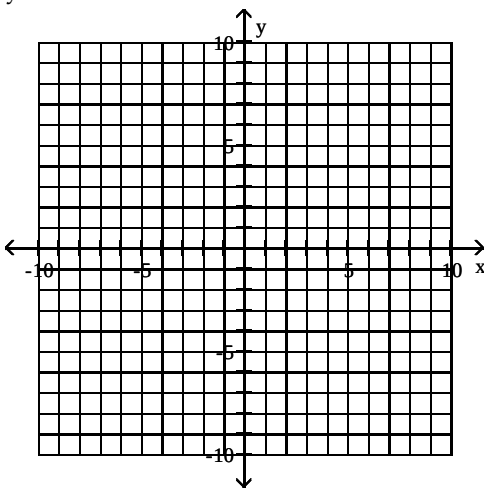


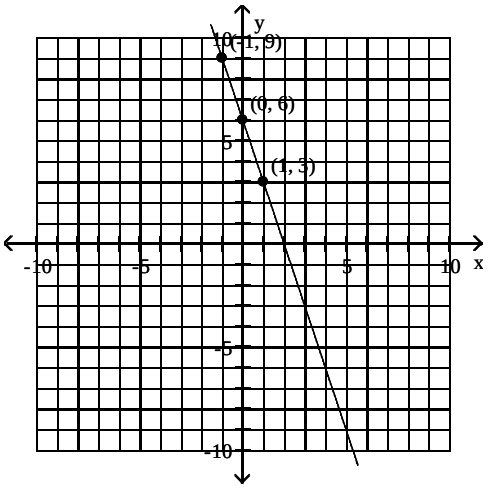
Answer: B

Objective: (9.3) Graph a Line by Plotting Points
final075 interactmath 9.2 #37

76) $y = -3x - 6$ 76) _____



A)



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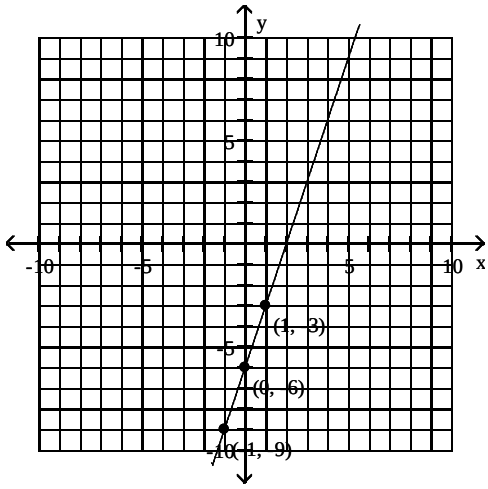
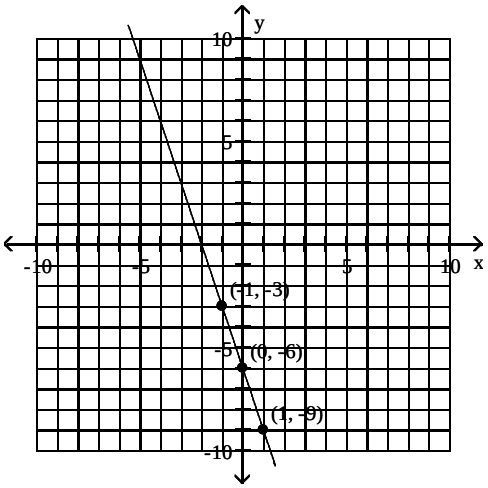
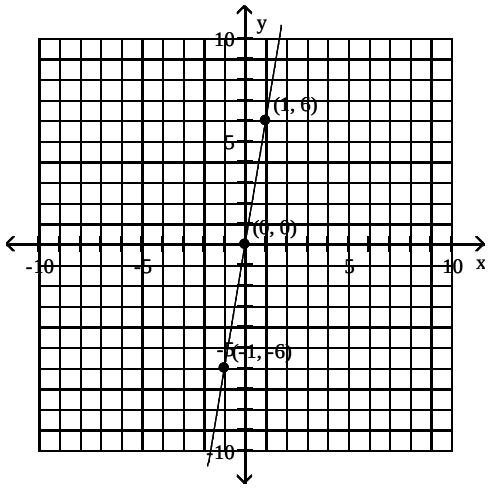


C)

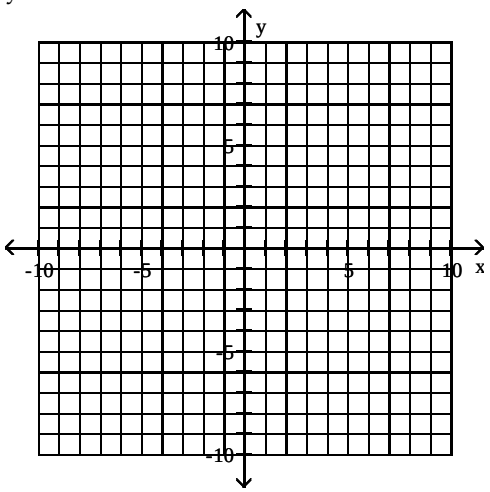


D)

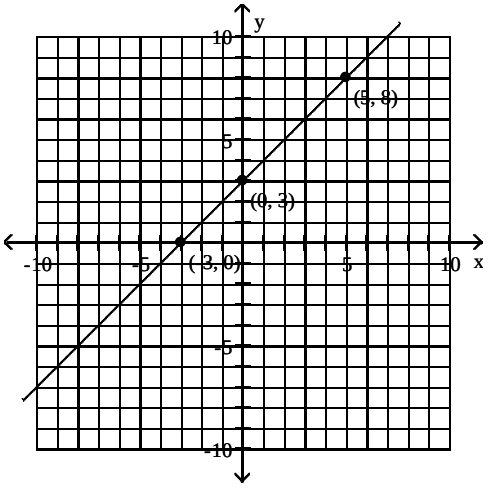


Answer: C
Objective: (9.3) Graph a Line by Plotting Points
final076 interactmath 9.2 #37

77) y = x – 3 77) _____



A)



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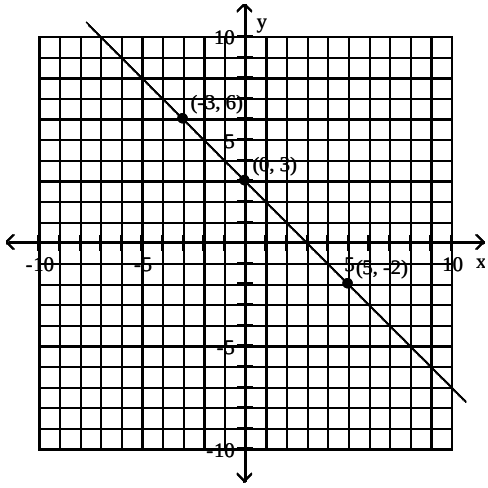

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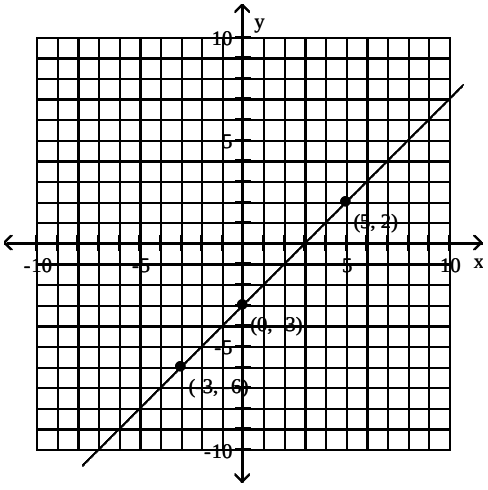

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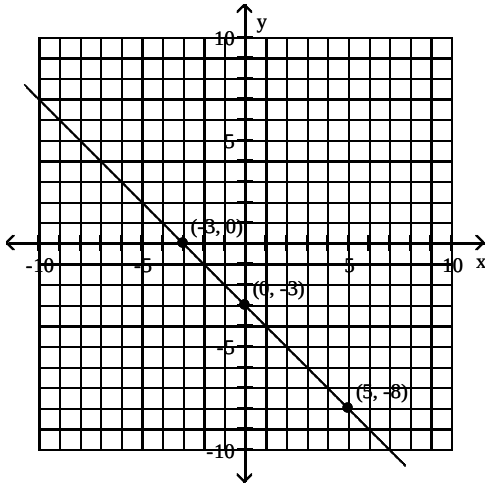
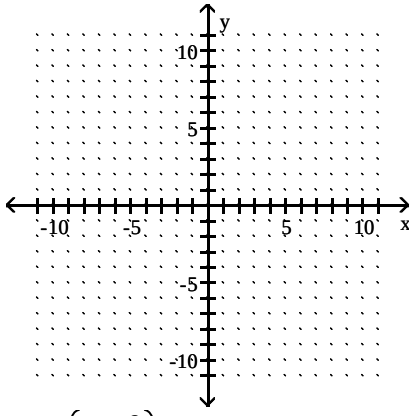


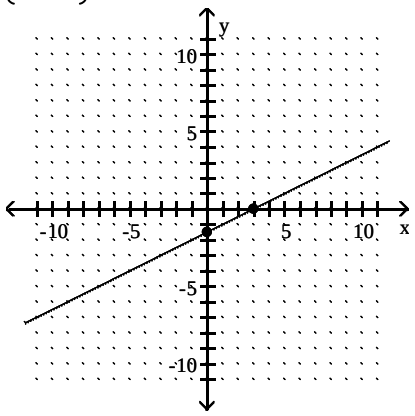
Answer: C
Objective: (9.3) Graph a Line by Plotting Points
final077 interactmath 9.2 #37

Graph the linear equation by finding and plotting its intercepts.

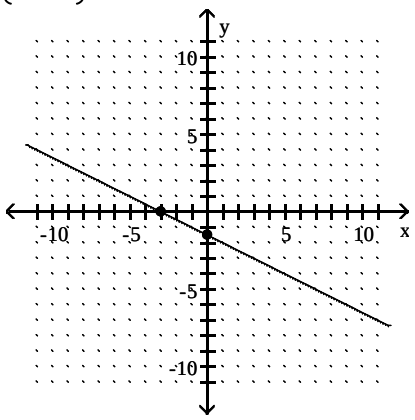
78) $6y - 3x = -9$ 78) _____



A) $\left(0, -\frac{3}{2}\right)$, (3, 0)



B) $\left(0, -\frac{3}{2}\right)$, (−3, 0)

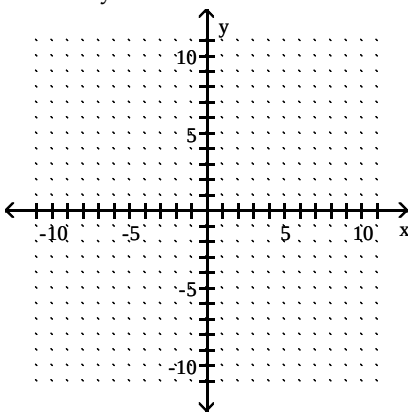


Answer: A

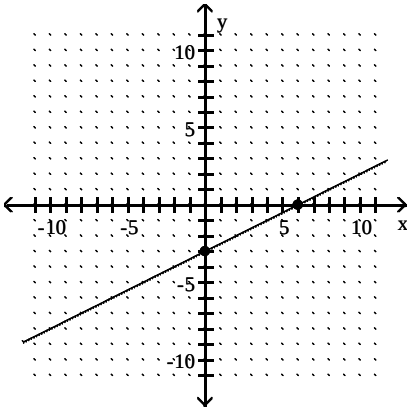
Objective: (9.3) Graph a Line Using Intercepts

final078 interactmath 9.2 #43

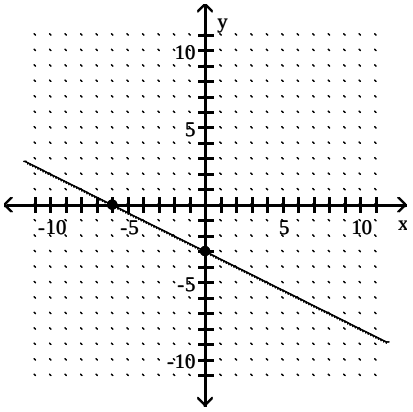
79) $-5x - 10y = 30$ 79) _____



A) (0, –3), (6, 0)



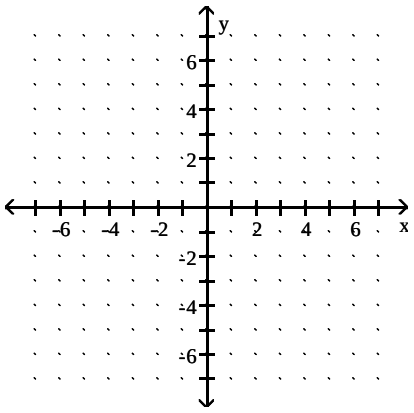
B) (0, –3), (–6, 0)



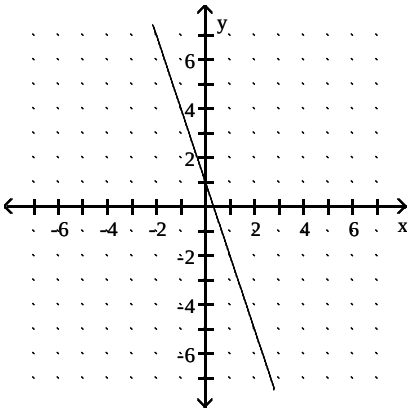
Answer: B
Objective: (9.3) Graph a Line Using Intercepts
final079 interactmath 9.2 #43

Use a graphing calculator to graph the equation.

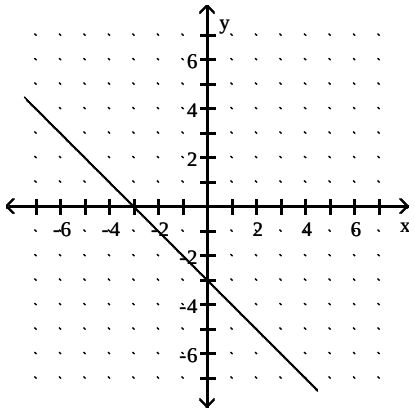
80) $y = -3x + 1$ 80) _____



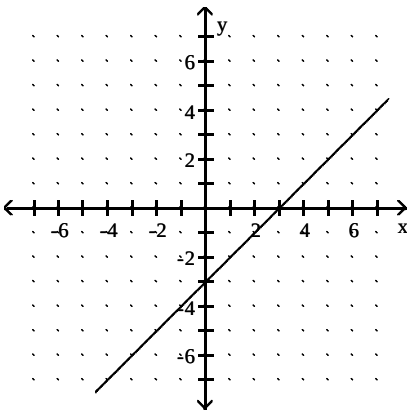
A)



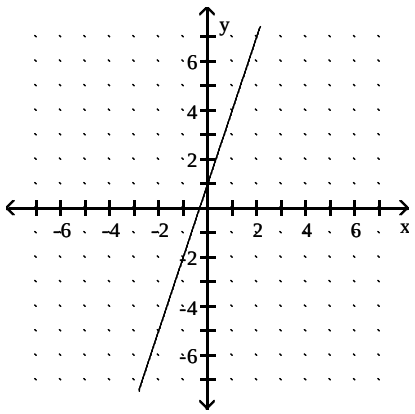
B)



C)



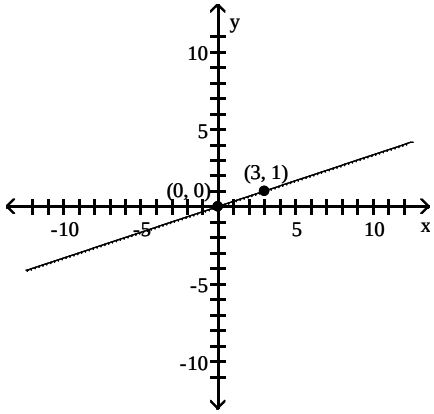
D)



Answer: A
Objective: (9.3) Graph a Line Using Intercepts
final080 interactmath 9.2 #63

Find the slope of the line through the points and interpret the slope.

81) 81) _____



A) –3; for every 1–unit increase in x, y will decrease by 3 units

B) $-\frac{1}{3}$; for every 3–unit increase in x, y will decrease by 1 unit

C) $\frac{1}{3}$; for every 3–unit increase in x, y will increase by 1 unit

D) 3; for every 1–unit increase in x, y will increase by 3 units

Answer: C
Objective: (9.4) Find the Slope of a Line Given Two Points
final081

82) (1, –3); (7, 8) 82) _____

A) $-\frac{6}{11}$; for every 11–unit increase in x, y will decrease by 6 units

B) $\frac{11}{6}$; for every 6–unit increase in x, y will increase by 11 units

C) $-\frac{11}{6}$; for every 6–unit increase in x, y will decrease by 11 units

D) $\frac{6}{11}$; for every 11–unit increase in x, y will increase by 6 units

Answer: B
Objective: (9.4) Find the Slope of a Line Given Two Points
final082

Find the slope of the line containing the two points.

83) (1, –5); (–9, 6) 83) _____

A) $-\frac{11}{10}$ B) $-\frac{10}{11}$ C) $\frac{11}{10}$ D) $\frac{10}{11}$

Answer: A
Objective: (9.4) Find the Slope of a Line Given Two Points
final083 interactmath 9.3 #23

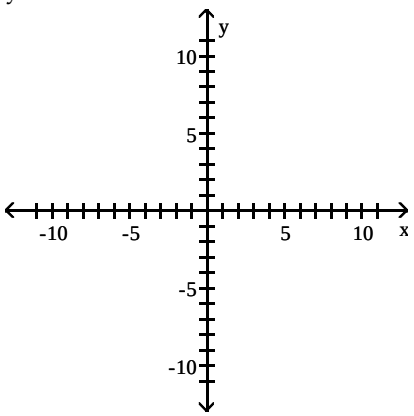
84) (–4, 7); (–3, –5) 84) _____

A) $-\frac{1}{12}$ B) $\frac{1}{12}$ C) 12 D) – 12

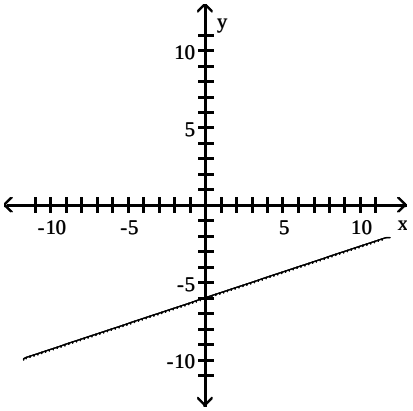
Answer: D
Objective: (9.4) Find the Slope of a Line Given Two Points
final084 interactmath 9.3 #23

Find any two ordered pairs on the line. Graph the line and determine its slope.

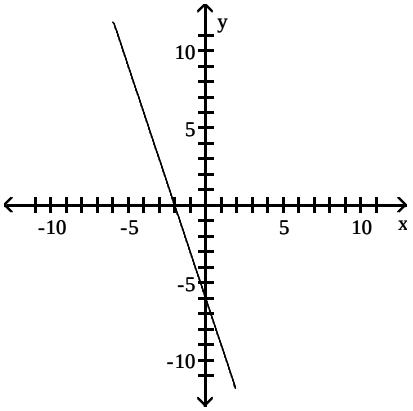
85) y = –3x – 6 85) _____



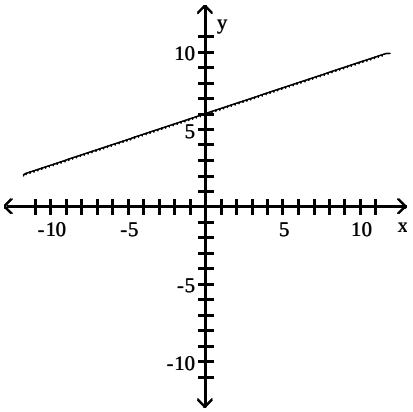
A) m = –6



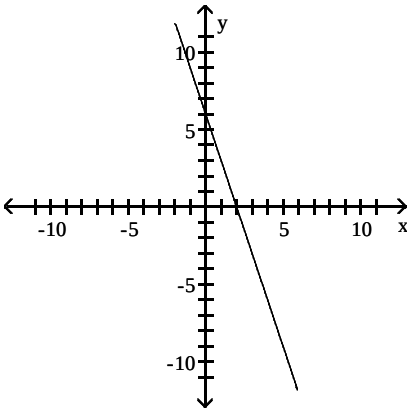
B) m = –3



C) m = –6

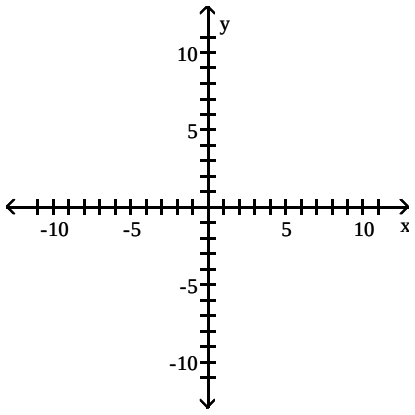


D) m = –3

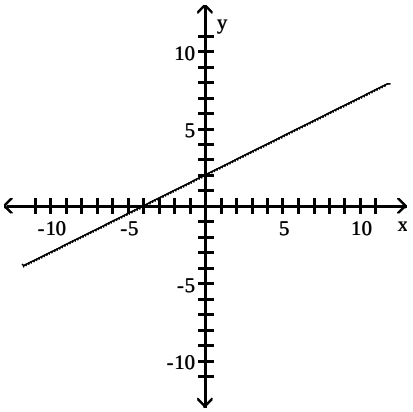


Answer: B
Objective: (9.4) Find the Slope of a Line Given Two Points
final085 interactmath 9.2 #95

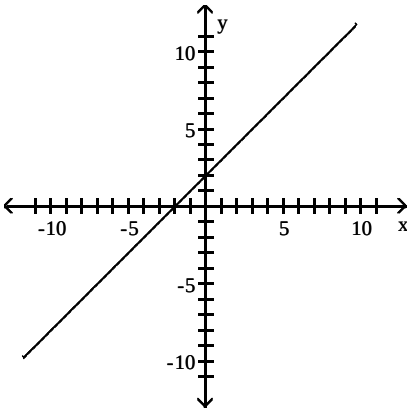
86) $y = \frac{1}{2}x + 2$ 86) _____



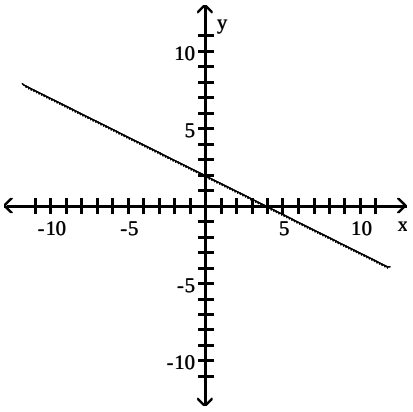
A) $m = \frac{1}{2}$



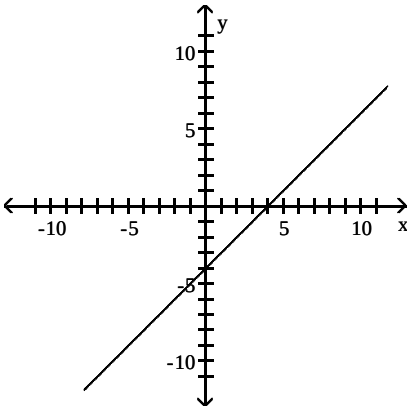
B) $m = \frac{1}{2}$



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



D) $m = \frac{1}{2}$



Answer: A
Objective: (9.4) Find the Slope of a Line Given Two Points
final086 interactmath 9.2 #79

Find the slope and the y–intercept.

87) $y = 3x + 11$ 87) _____

A) $m = 11; b = 3$ B) $m = \frac{1}{3}; b = 11$ C) $m = -3; b = -11$ D) $m = 3; b = 11$

Answer: D
Objective: (9.5) Use the Slope–Intercept Form to Identify the Slope and y–Intercept of a Line
final087 interactmath 9.4 #25

88) $y = \frac{2}{3}x + \frac{5}{6}$ 88) _____

A) $m = -\frac{2}{3};\ b = -\frac{5}{6}$ B) $m = \frac{3}{2};\ b = \frac{6}{5}$

C) $m = \frac{2}{3}; b = \frac{5}{6}$ D) $m = \frac{5}{6};\ b = \frac{2}{3}$

Answer: C
Objective: (9.5) Use the Slope–Intercept Form to Identify the Slope and y–Intercept of a Line
final088

89) $3x + y = 4$ 89) _____

A) $m = -\frac{1}{3}; b = \frac{4}{3}$ B) $m = -3; b = 4$ C) $m = \frac{3}{4}; b = \frac{1}{4}$ D) $m = 3; b = 4$

Answer: B
Objective: (9.5) Use the Slope–Intercept Form to Identify the Slope and y–Intercept of a Line
final089 interactmath 9.4 #29

90) $7x - 3y = -11$ 90) _____

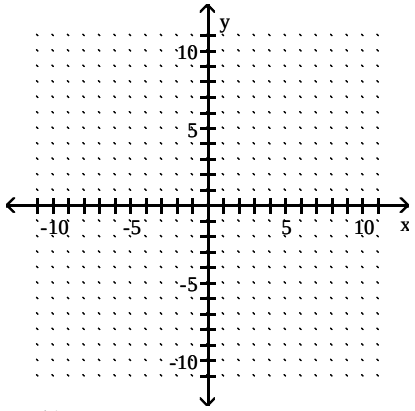
A) $m = -7; b = -11$ B) $m = \frac{7}{3}; b = \frac{11}{3}$

C) $m = 21; b = 33$ D) $m = \frac{3}{7}; b = -\frac{11}{7}$

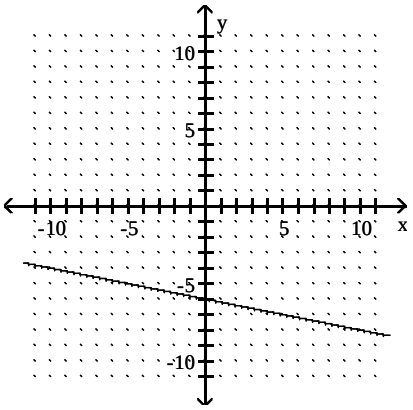
Answer: B
Objective: (9.5) Use the Slope–Intercept Form to Identify the Slope and y–Intercept of a Line
final090

Use the slope and y–intercept to graph the equation.

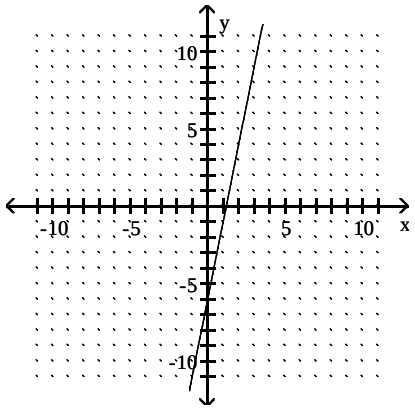
91) $y = 5x - 6$ 91) _____



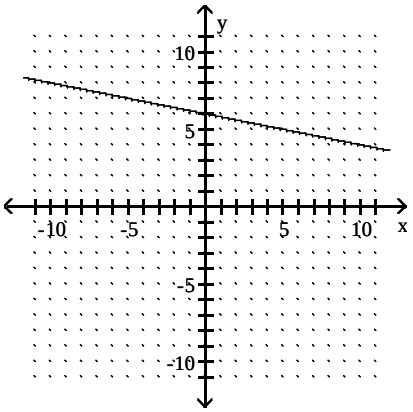
A)



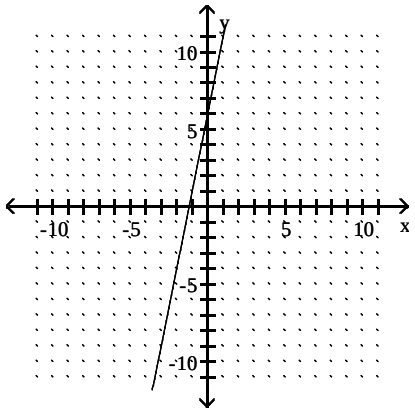
B)



C)



D)

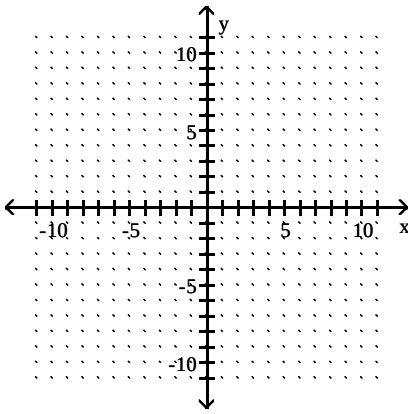


Answer: B

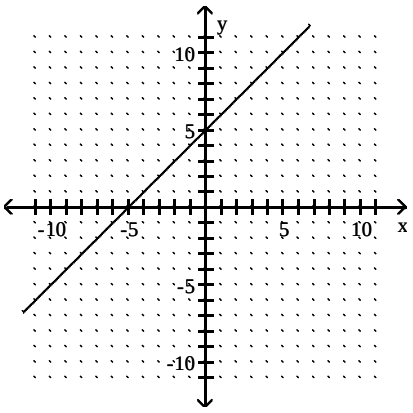
Objective: (9.5) Graph a Line Whose Equation Is in Slope–Intercept Form

final091 interactmath 9.4 quick check 9.4.7

92) $y = \frac{1}{2}x + 5$ 92) _____



A)



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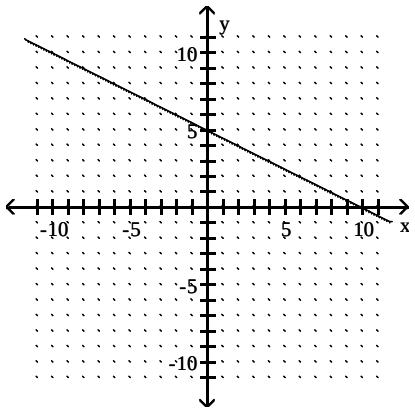
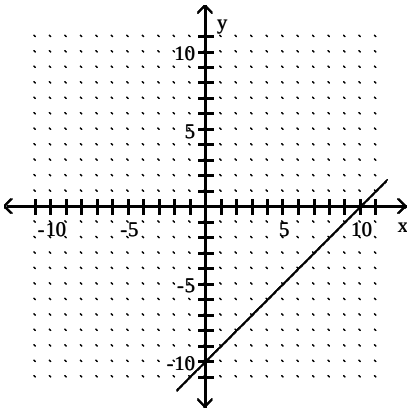
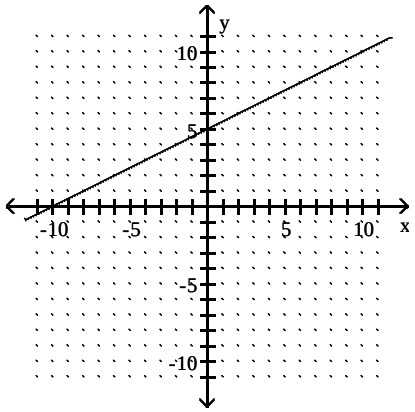


C)



D)

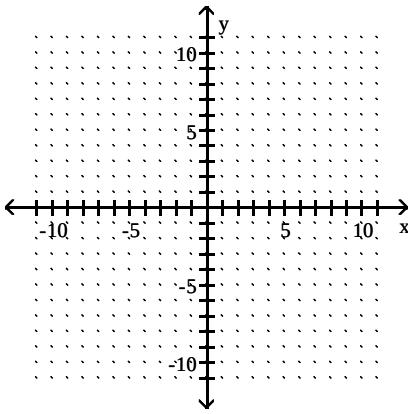


Answer: D

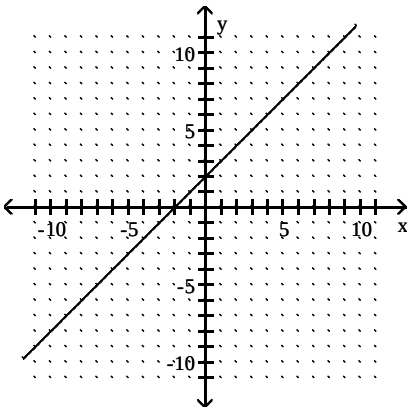
Objective: (9.5) Graph a Line Whose Equation Is in Slope–Intercept Form

final092 interactmath 9.4 #45

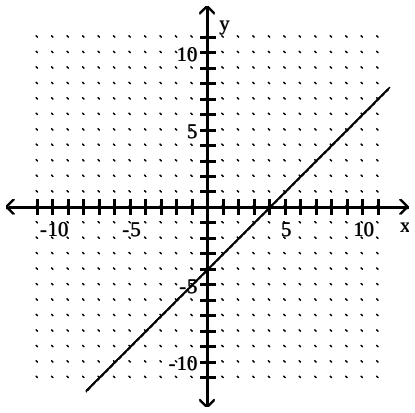
93) $y = -\frac{1}{2}x + 2$ 93) _____



A)



B)



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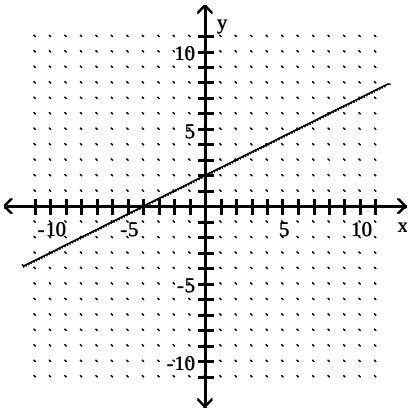
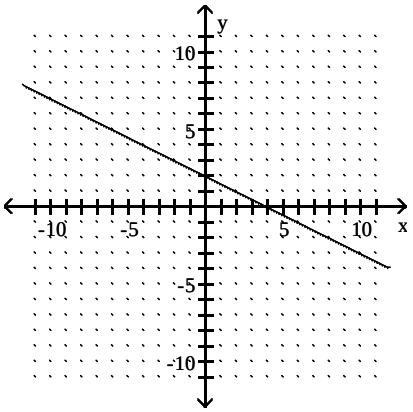


D)

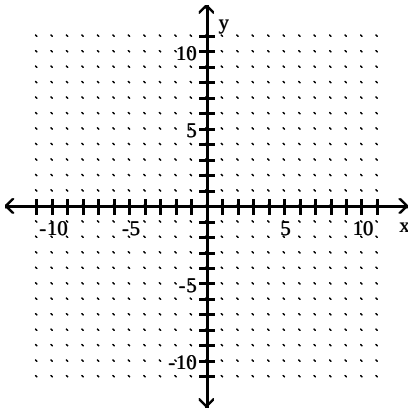


Answer: D

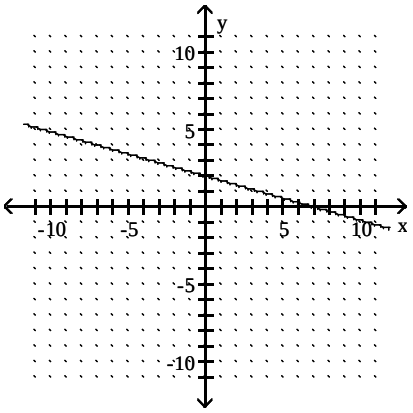
Objective: (9.5) Graph a Line Whose Equation Is in Slope–Intercept Form

final093 interactmath 9.4 #45

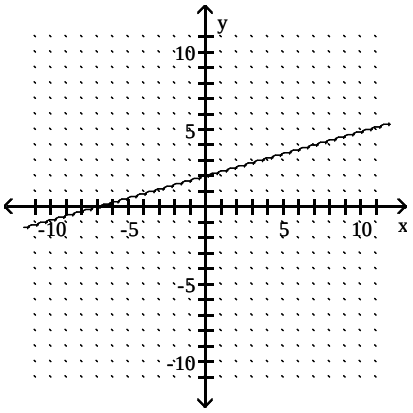
94) $7x + 2y = 14$ 94) _____



A)



B)



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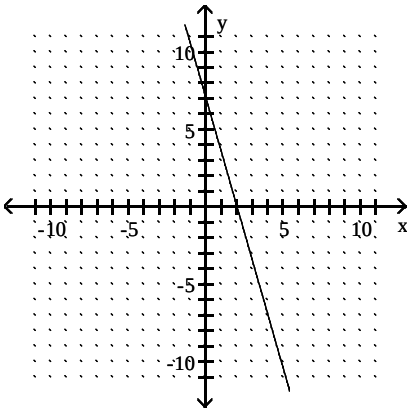
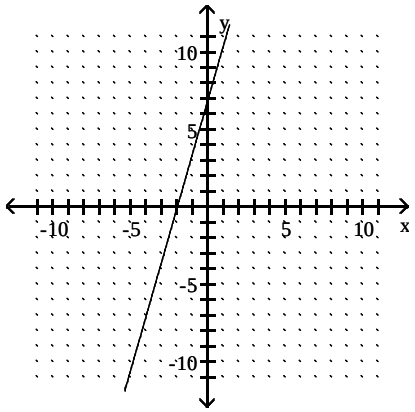


D)



Answer: C
Objective: (9.5) Graph a Line Whose Equation Is in the Form Ax + By = C
final094 interactmath 9.4 #51

Find the equation of the line with the given slope and intercept.

95) Slope –8; y–intercept is 2 95) _____

A) y = –2x + 8 B) y = 8x – 2 C) y = –8x + 2 D) y = 2x – 8

Answer: C
Objective: (9.5) Find the Equation of a Line Given Its Slope and y–Intercept
final095 interactmath 9.4 #57

Find the equation of the line described. Write the equation in slope –intercept form, if possible.

96) (4, 3); slope = –3 96) _____

A) y = –3x + 15 B) x = –3y + 15 C) y = –3x – 15 D) x = –3y – 15

Answer: A
Objective: (9.6) Find the Equation of a Line Given a Point and a Slope
final096 interactmath 9.5 #13

97) (–2, –7); slope = –2 97) _____

A) x = –2y + 11 B) y = –2x – 11 C) x = –2y – 11 D) y = –2x + 11

Answer: B
Objective: (9.6) Find the Equation of a Line Given a Point and a Slope
final097 interactmath 9.5 #13

Determine if the lines parallel, perpendicular, or neither.

98) L_1: y = x – 6 98) _____

L_2: y = 2 – x

A) neither B) perpendicular C) parallel

Answer: B
Objective: (9.7) Determine Whether Two Lines Are Perpendicular
final098 interactmath 9.6 #29

99) L_1: y = 7x + 9 99) _____

L_2: y = –7x – 3

A) perpendicular B) parallel C) neither

Answer: C
Objective: (9.7) Determine Whether Two Lines Are Perpendicular
final099 interactmath 9.6 #29

100) L_1: $y = 7x + 5$ 100) _____

L_2: $y = -\frac{1}{7}x + 3$

A) perpendicular B) parallel C) neither

Answer: A
Objective: (9.7) Determine Whether Two Lines Are Perpendicular
ffinal100 interactmath 9.6 #33

101) L_1: $6x + 2y = 8$ 101) _____

L_2: $18x + 6y = 27$

A) parallel B) neither C) perpendicular

Answer: A
Objective: (9.7) Determine Whether Two Lines Are Perpendicular
final101 interactmath 9.6 #33

Solve the system of equations using substitution.

102) $\begin{cases} x + y = -6 \\ y = 2x \end{cases}$ 102) _____

A) (–2, 4) B) (–2, –4) C) (2, 4) D) (2, –4)

Answer: B
Objective: (10.3) Solve a System of Linear Equations Using the Substitution Method
final102 interactmath 10.2 #13,35

Solve the system of equations using elimination.

103) $\begin{cases} 3x + y = -30 \\ 5x - y = 6 \end{cases}$ 103) _____

A) (–3, –21) B) no solution
C) infinitely many solutions D) (–21, –3)

Answer: A
Objective: (10.4) Solve a System of Linear Equations Using the Elimination Method
final103 interactmath 10.3 #15

104) $\begin{cases} x + y = -11 \\ x - y = -1 \end{cases}$ 104) _____

A) (–6, –5) B) no solution C) (6, –4) D) (–7, –4)

Answer: A
Objective: (10.4) Solve a System of Linear Equations Using the Elimination Method
final104 interactmath 10.3 quick check 10.3.2

105) $\begin{cases} x + 6y = 45 \\ 6x + 6y = 30 \end{cases}$ 105) _____

A) infinite number of solutions B) (–3, 8)
C) (–8, –3) D) no solution

Answer: B
Objective: (10.4) Solve a System of Linear Equations Using the Elimination Method
final105 interactmath 10.3 #11,13,17,21

106) $\begin{cases} x - 4y = 17 \\ -3x - 5y = 51 \end{cases}$ 106) _____

A) (–8, –5) B) (–7, –6) C) (7, –5) D) no solution

Answer: B
Objective: (10.4) Solve a System of Linear Equations Using the Elimination Method
final106 interactmath 10.3 #17

Solve the system of equations using elimination. State whether the system is inconsistent, or consistent and dependent.

107) $\begin{cases} x + y = 4 \\ x + y = -6 \end{cases}$ 107) _____

A) no solution; consistent and dependent
B) infinitely many solutions; inconsistent
C) infinitely many solutions; consistent and dependent
D) no solution; inconsistent

Answer: D
Objective: (10.4) Solve a System of Linear Equations Using the Elimination Method
final107 interactmath 10.3 #19

Add the polynomials. Express your answer in standard form.

108) $(-2x^2 - 5x - 6) + (8x^2 - 5x + 4)$ 108) _____

A) $-16x^2 - 5x - 2$ B) $6x^4 - 10x^2 - 2$ C) $6x^2 - 10x - 2$ D) $6x^2 - 5x - 2$

Answer: C
Objective: (11.2) Simplify Polynomials by Combining Like Terms
final108

Subtract the polynomials. Express your answer in standard form.

109) $(7x^2 + 20x + 5) - (5x^2 - 4x - 12)$ 109) _____

A) $2x^2 + 24x - 7$ B) $2x^2 + 25x - 7$ C) $43x^9$ D) $2x^2 + 24x + 17$

Answer: D
Objective: (11.2) Simplify Polynomials by Combining Like Terms
final109 interactmath 11.1 #73,75

Evaluate the polynomial for the given value.

110) $-2x^2 + 8x - 3 \quad x = -3$ 110) _____

A) 39 B) 3 C) -9 D) -45

Answer: D
Objective: (11.2) Evaluate Polynomials
final110

Simplify the expression.

111) $(-8x^9y^8z)^2$ 111) _____

A) $-8x^{11}y^{10}z$ B) $-64x^{18}y^{16}z^2$ C) $16x^{18}y^{16}z^2$ D) $64x^{18}y^{16}z^2$

Answer: D
Objective: (11.3) Simplify Exponential Expressions Containing Products
final111

Multiply the monomials.

112) $(-6z^2)(5z^3)$ 112) _____

A) $-30z^5$ B) $30z^6$ C) $4500z^5$ D) $-30z^6$

Answer: A
Objective: (11.3) Multiply a Monomial by a Monomial
final112

113) $(7x^6y)(8x^2y^4)$ 113) _____

A) $56x^8y^5$ B) $56x^8y^4$ C) $56x^{12}y^4$ D) $15x^8y^4$

Answer: A
Objective: (11.3) Multiply a Monomial by a Monomial
final113

114) $(m^3n)^4(-4mn^6)$ 114) _____

A) $-16m^4n^7$ B) $4m^{13}n^{10}$ C) $-4m^{12}n^{24}$ D) $-4m^{13}n^{10}$

Answer: D
Objective: (11.3) Multiply a Monomial by a Monomial
final114

Use the Distributive Property to find the product.

115) $-11x(6x - 4)$ 115) _____

A) $-66x^2 - 4x$ B) $-22x^2$ C) $-66x^2 + 44x$ D) $6x^2 + 44x$

Answer: C
Objective: (11.4) Multiply a Polynomial by a Monomial
final115

116) $2y^2(3y^2 + 3y - 7)$ 116) _____

A) $6y^4 + 6y - 14$ B) $5y^4 + 5y - 5$

C) $6y^4 + 6y^3 - 14y^2$ D) $6y^4 + 6y^2 - 14$

Answer: C
Objective: (11.4) Multiply a Polynomial by a Monomial
final116 interactmath 11.3 #39

117) $(x + 3)(x + 3)$ 117) _____

A) $x^2 + 5x + 9$ B) $x^2 + 6x + 9$ C) $x^2 + 6x + 5$ D) $x^2 + 9x + 6$

Answer: B
Objective: (11.4) Multiply Two Binomials Using the Distributive Property
final117 interactmath 11.3 #43

118) $(4y - 5)(4y - 3)$ 118) _____

A) $16y^2 + 15$ B) $16y^2 + 8y + 15$ C) $16y^2 - 32y + 15$ D) $8y^2 - 8$

Answer: C
Objective: (11.4) Multiply Two Binomials Using the Distributive Property
final118 interactmath 11.3 #47

Find the product using the FOIL method.

119) $(y - 1)(y - 4)$ 119) _____

A) $y^2 - 5y + 4$ B) $2y + 4$ C) $2y^2 - 4$ D) $y^2 + 5y - 4$

Answer: A
Objective: (11.4) Multiply Two Binomials Using the FOIL Method
final119 interactmath 11.3 #51

120) $(b - 8)(b + 1)$ 120) _____

A) $b^2 - 7b - 8$ B) $2b - 8$ C) $2b^2 + 8$ D) $b^2 + 7b + 8$

Answer: A
Objective: (11.4) Multiply Two Binomials Using the FOIL Method
final120 interactmath 11.3 #51

121) $(4x + 3)(x - 9)$ 121) _____

A) $x^2 - 27x - 33$ B) $x^2 - 33x - 34$ C) $4x^2 - 33x - 27$ D) $4x^2 - 34x - 27$

Answer: C
Objective: (11.4) Multiply Two Binomials Using the FOIL Method
final21 interactmath 11.3 #53

122) $(3n + 5p)(6n + p)$ 122) _____

A) $18n^2 + 90np + 5p^2$ B) $36n^2 + 33np + 5p^2$

C) $18n + 33np + 5p$ D) $18n^2 + 33np + 5p^2$

Answer: D
Objective: (11.4) Multiply Two Binomials Using the FOIL Method
final122 interactmath 11.3 #59

123) $(9x + 4y)(7x - 2y)$ 123) _____

A) $63x^2 - 18xy - 8y^2$ B) $63x^2 + 28xy - 8y^2$

C) $63x^2 + 10xy - 8y^2$ D) $63x^2 + 10xy + 10y^2$

Answer: C
Objective: (11.4) Multiply Two Binomials Using the FOIL Method
final123 interactmath 11.3 #61

Find the product of the sum and difference of two terms.

124) $(x + 4)(x - 4)$ 124) _____

A) $x^2 + 8x - 16$ B) $x^2 - 16$ C) $x^2 - 8x - 16$ D) $x^2 - 8$

Answer: B
Objective: (11.4) Multiply the Sum and Difference of Two Terms
final124 interactmath 11.3 #63

125) $(7p + 9)(7p - 9)$ 125) _____

A) $49p^2 - 81$ B) $p^2 - 81$

C) $49p^2 + 126p - 81$ D) $49p^2 - 126p - 81$

Answer: A
Objective: (11.4) Multiply the Sum and Difference of Two Terms
final125 interactmath 11.3 #65

126) $(2x + 5y)(2x - 5y)$ 126) _____

A) $4x^2 - 20xy - 25y^2$ B) $4x^2 + 25y^2$

C) $4x^2 + 20xy - 25y^2$ D) $4x^2 - 25y^2$

Answer: D
Objective: (11.4) Multiply the Sum and Difference of Two Terms
final126 interactmath 11.3 #65

Find the product.

127) $(n + 15)^2$ 127) _____

A) $n^2 + 225$ B) $n^2 + 30n + 225$

C) $225n^2 + 30n + 225$ D) $n + 225$

Answer: B
Objective: (11.4) Square a Binomial
final127 interactmath 11.3 #73

128) $(w - 11)^2$ 128) _____

A) $w^2 + 121$ B) $w^2 - 22w + 121$

C) $w + 121$ D) $121w^2 - 22w + 121$

Answer: B
Objective: (11.4) Square a Binomial
final128 interactmath 11.3 #75

129) $(4x + 3y)^2$ 129) _____

A) $4x^2 + 9y^2$ B) $4x^2 + 24xy + 9y^2$

C) $16x^2 + 24xy + 9y^2$ D) $16x^2 + 9y^2$

Answer: C
Objective: (11.4) Square a Binomial
final129 interactmath 11.3 #77

130) $(6x - 11y)^2$ 130) _____

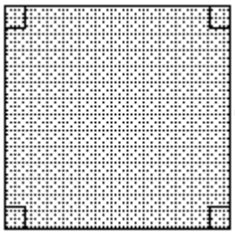
A) $36x^2 + 121y^2$ B) $6x^2 + 121y^2$

C) $36x^2 - 132xy + 121y^2$ D) $6x^2 - 132xy + 121y^2$

Answer: C
Objective: (11.4) Square a Binomial
fina130interactmath 11.7 #79

Find an algebraic expression that represents the area of the shaded region.

131) 131) _____



A) $49x^2 - 140x + 100$ B) $49x^2 + 140x + 100$

C) $49x^2 - 140x - 100$ D) $49x^2 + 140x - 100$

Answer: A
Objective: (11.4) Square a Binomial
final131 interactmath 11.3 #129

Find the product.

132) $(y - 7)(y^2 + 7y - 4)$ 132) _____

A) $y^3 - 14y^2 - 53y + 28$ B) $y^3 + 45y - 28$

C) $y^3 - 53y + 28$ D) $y^3 + 14y^2 + 53y - 28$

Answer: C
Objective: (11.4) Multiply a Polynomial by a Polynomial
final132 interactmath 11.3 #83

133) $(7x - 1)(x^2 - 4x + 1)$ 133) _____

A) $7x^3 - 27x^2 + 3x - 1$ B) $7x^3 + 29x^2 - 11x + 1$

C) $7x^3 - 28x^2 + 7x + 1$ D) $7x^3 - 29x^2 + 11x - 1$

Answer: D
Objective: (11.4) Multiply a Polynomial by a Polynomial
final133 interactmath 11.3 #87

134) $(2y + 11)(5y^2 - 2y - 9)$ 134) _____

A) $10y^3 + 51y^2 - 40y - 99$ B) $10y^3 + 59y^2 + 40y + 99$

C) $65y^2 - 26y - 117$ D) $10y^3 - 4y^2 - 18y + 11$

Answer: A
Objective: (11.4) Multiply a Polynomial by a Polynomial
final134 interactmath 11.3 #87

Use the Quotient Rule to simplify. All variables are nonzero.

135) $\frac{56m^{20}n^{14}}{7m^{19}n^{10}}$ 135) _____

A) $8n^4$ B) $8mn^4$ C) $56mn^4$ D) $8m^{39}n^{24}$

Answer: B
Objective: (11.5) Simplify Exponential Expressions Using the Quotient Rule
final135 interactmath 11.4 #41

136) $\frac{24x^6y^{11}}{6x^3y^6}$ 136) _____

A) $4x^3y^5$ B) $4x^2y^4$ C) x^3y^5 D) $4x^2y^3$

Answer: A
Objective: (11.5) Simplify Exponential Expressions Using the Quotient Rule
final136 interactmath 11.4 #41

Use the Quotient to a Power Rule to simplify. All variables are nonzero.

137) $\left(\frac{5}{6}\right)^3$ 137) _____

A) $\frac{6}{125}$ B) $\frac{125}{6}$ C) $\frac{216}{125}$ D) $\frac{125}{216}$

Answer: D
Objective: (11.5) Simplify Exponential Expressions Using the Quotient to a Power Rule
final137 interactmath 11.4 #43

138) $\left(\frac{6t^3}{3s^4}\right)^2$ 138) _____

A) $\frac{4t^6}{s^4}$ B) $\frac{4t^6}{s^8}$ C) $\frac{4t^5}{s^6}$ D) $\frac{2t^6}{s^8}$

Answer: B
Objective: (11.5) Simplify Exponential Expressions Using the Quotient to a Power Rule
final138 interactmath 11.4 #49

Use the Zero Exponent Rule to simplify. All variables are nonzero.

139) 9^0 139) _____

A) 1 B) 9 C) 0 D) –1

Answer: A
Objective: (11.5) Simplify Exponential Expressions Using Zero as an Exponent
final139 interactmath 11.4 #51

140) $\left(\frac{5}{7}\right)^0$ 140) _____

A) 0 B) $\frac{5}{7}$ C) 2 D) 1

Answer: D
Objective: (11.5) Simplify Exponential Expressions Using Zero as an Exponent
final140 interactmath 11.4 #53

Use the Negative Exponent Rules to simplify. Write the answer with positive exponents. All variables are nonzero.

141) 7^{-1} 141) _____

A) $-\frac{1}{7}$ B) 7 C) $\frac{1}{7}$ D) -7

Answer: C
Objective: (11.5) Simplify Exponential Expressions Using Negative Exponents
final141 interactmath 11.4 #63

142) 3^{-4} 142) _____

A) -81 B) $\frac{1}{81}$ C) $\frac{1}{12}$ D) 81

Answer: B
Objective: (11.5) Simplify Exponential Expressions Using Negative Exponents
final142 interactmath 11.4 #63

Use the Laws of Exponents to simplify. Write the answer with positive exponents. All variables are nonzero.

143) $(-5x^6y^{-7})(3x^{-1}y)$ 143) _____

A) $-15x^5y^8$ B) $\frac{-15x^5}{y^6}$ C) $\frac{-15x^7}{y^8}$ D) $\frac{-2x^5}{y^6}$

Answer: B
Objective: (11.5) Simplify Exponential Expressions Using the Laws of Exponents
fin143 interactmath11.4 #109

Divide and simplify.

144) $\frac{21r^7 - 35r^4}{7r}$ 144) _____

A) $3r^8 - 5r^5$ B) $3r^6 - 5r^3$ C) $21r^6 - 35r^3$ D) $3r^7 - 5r^4$

Answer: B
Objective: (11.6) Divide a Polynomial by a Monomial
final144 interactmath 11.5 #13

145) $\frac{24x^2 + 20x - 11}{4x}$ 145) _____

A) $6x - 6$ B) $6x^2 + 5x - \frac{11}{4}$ C) $24x + 20 - \frac{11}{4x}$ D) $6x + 5 - \frac{11}{4x}$

Answer: D
Objective: (11.6) Divide a Polynomial by a Monomial
final145 interactmath 11.5 #31,33,41

146) $\frac{14x^4 - 6x^3 + 8x^2}{2x^3}$ 146) _____

A) $7x - 3$ B) $7x - 6x^3 + \frac{4}{x}$ C) $7x - 3 + \frac{4}{x}$ D) $11x - 3$

Answer: C
Objective: (11.6) Divide a Polynomial by a Monomial
fin146 interactmath 11.5 #21

Find the quotient using long division.

147) $\frac{x^2 + 13x + 40}{x + 8}$ 147) _____

A) $x^2 + 5$ B) $x + 5$ C) $x - 32$ D) $x^3 - 32$

Answer: B
Objective: (11.6) Divide a Polynomial by a Binomial
final147 interactmath 11.5 #31

148) $\frac{3m^2 + 17m - 56}{m + 8}$ 148) _____

A) $3m - 7 + \frac{6}{m - 7}$ B) $m - 7$ C) $3m - 7$ D) $3m + 7$

Answer: C
Objective: (11.6) Divide a Polynomial by a Binomial
final148 interactmath 11.5 #33

Factor the GCF from the polynomial.

149) $4x^5 + 16x^3$ 149) _____

A) $4x^3(x^2 + 4)$ B) $x^5(4x^2 + 16)$ C) $4x^4(x + 4x)$ D) $4(x^5 + 4x^3)$

Answer: A
Objective: (12.2) Factor Out the Greatest Common Factor in Polynomials
final149 interactmath 12.2 #47,51

150) $20x^5y + 36xy^6$ 150) _____

A) $4y(5x^5 + 9xy^5)$ B) $4xy(5x^4 + 9y^5)$ C) $xy(20x^4 + 36y^5)$ D) $4x(5x^4y + 9y^6)$

Answer: B
Objective: (12.2) Factor Out the Greatest Common Factor in Polynomials
final150 interactmath 12.2 #47,51

Factor by grouping.

151) $5x + 50 + xy + 10y$ 151) _____

A) $(x + 10y)(5 + y)$ B) $(y + 10)(x + 5)$ C) $(x + 10)(5 + y)$ D) $(y + 10)(5x + y)$

Answer: C
Objective: (12.2) Factor Polynomials by Grouping
final151

152) $3x - 36 + xy - 12y$ 152) _____

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

Answer: C
Objective: (12.2) Factor Polynomials by Grouping
final152

Factor the trinomial completely. If the trinomial cannot be factored, say it is prime.

153) $x^2 + x - 20$ 153) _____

A) $(x - 5)(x + 4)$ B) $(x + 1)(x - 20)$ C) prime D) $(x - 4)(x + 5)$

Answer: D
Objective: (12.3) Factor Trinomials of the Form x^2 + bx + c
final153 interactmath 12.2 #63

154) $x^2 + 2x - 35$ 154) _____

A) $(x + 7)(x - 5)$ B) prime C) $(x - 7)(x + 5)$ D) $(x - 7)(x + 1)$

Answer: A
Objective: (12.3) Factor Trinomials of the Form x^2 + bx + c
final154 interactmath 12.2 #35

155) $x^2 - x - 12$ 155) _____

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

Answer: A
Objective: (12.3) Factor Trinomials of the Form x^2 + bx + c
final155 interactmath 12.2 #29

156) $x^2 - 6x + 8$ 156) _____

A) $(x - 4)(x - 2)$ B) $(x + 4)(x - 2)$ C) prime D) $(x + 4)(x + 1)$

Answer: A
Objective: (12.3) Factor Trinomials of the Form x^2 + bx + c
final156 interactmath 12.2 #27

157) $x^2 + 13xy + 36y^2$ 157) _____

A) $(x - 9y)(x + y)$ B) prime C) $(x + 9y)(x + 4y)$ D) $(x - 9y)(x + 4y)$

Answer: C
Objective: (12.3) Factor Trinomials of the Form x^2 + bx + c
final157 interactmath 12.2 #37

158) $4x^2 + 12x - 40$ 158) _____

A) $4(x + 2)(x - 5)$ B) $4(x - 2)(x + 5)$ C) $(4x + 8)(x - 5)$ D) $(x - 2)(4x + 20)$

Answer: B
Objective: (12.3) Factor Out the GCF, Then Factor x^2 + bx + c
final158 interactmath 12.2 #45

Factor the polynomial completely using the trial and error method.

159) $6x^2 - x - 7$ 159) _____

A) $(6x - 1)(x + 7)$ B) $(6x - 7)(x + 1)$ C) $(6x + 1)(x - 7)$ D) $(6x + 7)(x - 1)$

Answer: B
Objective: (12.4) Factor ax^2 + bx + c, a ≠ 1, Using Trial and Error
fin159 interactmath 12.3 #27

Factor completely. If the polynomial is prime, state so.

160) $81x^2 - 64$ 160) _____

A) $(9x + 8)^2$ B) prime C) $(9x + 8)(9x - 8)$ D) $(9x - 8)^2$

Answer: C
Objective: (12.5) Factor Difference of Two Squares
final160 interactmath 12.4 #39,41

161) $4x^2 - \frac{4}{9}$ 161) _____

A) $\left(2x + \frac{2}{3}\right)^2$ B) $\left(2x - \frac{2}{3}\right)^2$

C) $\left(4x + \frac{4}{9}\right)\left(4x - \frac{2}{9}\right)$ D) $\left(2x + \frac{2}{3}\right)\left(2x - \frac{2}{3}\right)$

Answer: D
Objective: (12.5) Factor Difference of Two Squares
final161 interactmath 12.4 #39,41

162) $81x^2 - 16y^2$ 162) _____

A) $(9x + 4y)(9x - 4y)$ B) prime

C) $(9x + 4y)^2$ D) $(9x - 4y)^2$

Answer: A
Objective: (12.5) Factor Difference of Two Squares
final162 interactmath 12.4 #39,41

Factor completely. If a polynomial cannot be factored, say it is prime.

163) $a^2 - 2ab - 24b^2$ 163) _____

A) (a – 4b)(a + 6b) B) prime C) (a – 4b)(a + b) D) (a + 4b)(a – 6b)

Answer: D
Objective: (12.6) Factor Polynomials Completely
fin163 interactmath 12.2 #43

164) $x^3 - 5x^2 - 6x$ 164) _____

A) x(x – 6)(x + 1) B) x(x – 6)(x – 1) C) $x(x^2 - 5x - 6)$ D) x(x + 6)(x + 1)

Answer: A
Objective: (12.6) Factor Polynomials Completely
fin164 interactmath 12.2 #47

165) $5y^3 - 5y^2 - 100y$ 165) _____

A) 5y(y – 4)(y + 5) B) $(y - 4)(5y^2 + 25)$
C) 5y(y + 4)(y – 5) D) $(5y^2 + 20y)(y - 5)$

Answer: C
Objective: (12.6) Factor Polynomials Completely
fin165 interactmath 12.2 #47

Solve the equation by factoring.

166) x(4x + 12) = 0 166) _____

A) $\left\{0, \frac{1}{3}\right\}$ B) {0, 3} C) {0, –3} D) $\left\{0, -\frac{1}{3}\right\}$

Answer: C
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final166 interactmath 12.6 #25

167) 5x(6x + 30) = 0 167) _____

A) {0, –5} B) {0, –5 , 5} C) $\left\{0, -\frac{1}{5}\right\}$ D) {0, 5}

Answer: A
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final167 interactmath 12.6 #25

168) (y – 7)(9y + 26) = 0 168) _____

A) $\left\{-\frac{9}{26}, 7\right\}$ B) $\left\{-7, \frac{26}{9}\right\}$ C) $\left\{-7, \frac{9}{26}\right\}$ D) $\left\{-\frac{26}{9}, 7\right\}$

Answer: D
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final168 interactmath 12.6 #27

169) $12n^2 + 44n = 0$ 169) _____

A) {0} B) $\left\{-\frac{11}{3}, 44\right\}$ C) $\left\{-\frac{11}{3}\right\}$ D) $\left\{-\frac{11}{3}, 0\right\}$

Answer: D
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final169 interactmath 12.6 #45

170) $x^2 + 2x - 48 = 0$ 170) _____

A) {–8, 6} B) {8, –6} C) {8, 6} D) {–8, 1}

Answer: A
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final170 interactmath 12.6 #35,37

171) $x^2 - 17x + 72 = 0$ 171) _____

A) {−9, −8} B) {9, 8} C) {72, 0} D) {−9, 8}

Answer: B
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final171 interactmath 12.6 #37

172) $2x^2 - 3x - 5 = 0$ 172) _____

A) $\left\{\frac{2}{5}, 0\right\}$ B) $\left\{\frac{2}{5}, -1\right\}$ C) $\left\{\frac{5}{2}, -1\right\}$ D) $\left\{\frac{2}{5}, 1\right\}$

Answer: C
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final172 interactmath 12.6 #41

173) $x^2 - x = 42$ 173) _____

A) {6, 7} B) {−6, −7} C) {1, 42} D) {−6, 7}

Answer: D
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final173 interactmath 12.6 #47

174) $x^2 = 2x$ 174) _____

A) {2} B) {0, −2} C) {0, 2} D) {−2}

Answer: C
Objective: (12.7) Solve Quadratic Equations Using the Zero–Product Property
final174 interactmath 12.6 #39,45

Simplify the rational expression. Assume that no variable has a value which results in a denominator with a value of zero.

175) $\frac{y^2 + 12y + 27}{y^2 + 13y + 36}$ 175) _____

A) $\frac{12y + 27}{13y + 36}$ B) $-\frac{y^2 + 12y + 27}{y^2 + 13y + 36}$ C) $\frac{y + 3}{y + 4}$ D) $\frac{12y + 3}{13y + 4}$

Answer: C
Objective: (13.2) Simplify Rational Expressions
fin175 interactmath

Perform the indicated operation.

176) $\frac{8m^2p}{33p^4} \cdot \frac{11mp^3}{24m^7}$ 176) _____

A) $\frac{m^4}{9}$ B) $\frac{1}{9m^{10}}$ C) $\frac{m^{10}}{9}$ D) $\frac{1}{9m^4}$

Answer: D
Objective: (13.3) Multiply Rational Expressions
fin176 interactmath 13.2 #15,17

177) $\frac{z^2 - 12z + 36}{z^2 - 9} \cdot \frac{z^2 - 3z}{z - 6}$ 177) _____

A) $\frac{z(z - 6)}{z - 3}$ B) $\frac{(z - 6)}{z + 3}$ C) $\frac{z(z - 6)}{z + 3}$ D) $\frac{z}{z - 3}$

Answer: C
Objective: (13.3) Multiply Rational Expressions
fin177

178) $\frac{4m^9n^3}{5m} \div \frac{9m^3n^8}{8n^3}$ 178) _____

A) $\frac{32m^6}{45n^8}$ B) $\frac{32m^5}{45n^2}$ C) $\frac{32m^6}{45n^3}$ D) $\frac{32m^5}{45n^3}$

Answer: B
Objective: (13.3) Divide Rational Expressions
fin178 interactmath 13.2 quick check 13.2.3

179) $\frac{x^2 - 8x + 16}{3x - 12} \div \frac{2x - 8}{6}$ 179) _____

A) 1 B) $\frac{(x - 4)^2}{9}$ C) 6 D) $\frac{x^2 - 8x + 16}{(x - 4)^2}$

Answer: A
Objective: (13.3) Divide Rational Expressions
fin179 interactmath 13.2 #25

180) $\frac{x^2 - 3x}{x^2 - 9} \div \frac{x + 3}{x^2 + 6x + 9}$ 180) _____

A) $\frac{x}{(x + 3)(x + 3)}$ B) $-x$ C) $\frac{1}{x}$ D) x

Answer: D
Objective: (13.3) Divide Rational Expressions
fin180 interactmath 13.2 #25

181) $\frac{m^2 - 9m}{m - 6} + \frac{18}{m - 6}$ 181) _____

A) m + 3 B) m – 6 C) $\frac{m^2 - 9m + 18}{m - 6}$ D) m – 3

Answer: D
Objective: (13.4) Add Rational Expressions With a Common Denominator
fin181 interactmath 13.3 quick check 13.3.4

Solve the equation and state the solution set.

182) $\frac{x - 5}{9} = \frac{x + 3}{5}$ 182) _____

A) {2} B) {– 13} C) $\left\{\frac{5}{9}\right\}$ D) $\left\{\frac{52}{45}\right\}$

Answer: B
Objective: (13.8) Solve Equations Containing Rational Expressions
fin182 interactmath 13.7 #19

183) $\frac{3}{x} - \frac{1}{4} = \frac{5}{x}$ 183) _____

A) $\left\{\frac{5}{3}\right\}$ B) {2} C) {–8} D) {8}

Answer: C
Objective: (13.8) Solve Equations Containing Rational Expressions
fin183 interactmath 13.7 #17

184) $\frac{2}{5x} - \frac{5}{3} = \frac{2}{15x} - \frac{5}{45}$ 184) _____

A) $\left\{\frac{6}{35}\right\}$ B) $\left\{\frac{3}{10}\right\}$ C) $\left\{\frac{3}{20}\right\}$ D) $\left\{\frac{12}{35}\right\}$

Answer: A
Objective: (13.8) Solve Equations Containing Rational Expressions
fin184 interactmath 13.7 #17

Find the function value.

185) Find f(14) when f(x) = 2x + 12. 185) _____

A) –16 B) 40 C) 29.2 D) 16

Answer: B
Objective: (14.4) Find the Value of a Function
final185 interactmath 14.3 #53

186) Find f(5) when f(x) = –7x + 6. 186) _____

A) –1 B) 41 C) –29 D) –35

Answer: C
Objective: (14.4) Find the Value of a Function
final186 interactmath 14.3 #55

187) Find f(x – 3) when f(x) = –5x – 7. 187) _____

A) –5x – 8 B) –5x + 8 C) –5x + 5 D) –5x – 10

Answer: B
Objective: (14.4) Find the Value of a Function
final187 interactmath 14.3 #61

188) Find f(3) when f(x) = x^2 + 3x – 4. 188) _____

A) –4 B) 4 C) 22 D) 14

Answer: D
Objective: (14.4) Find the Value of a Function
final188 interactmath 14.3 #59

189) Find f(–9) when f(x) = |x| – 6. 189) _____

A) 3 B) –3 C) 15 D) –15

Answer: A
Objective: (14.4) Find the Value of a Function
final189 interactmath 14.3 #69

190) $f(x) = \frac{x + 5}{14x - 10}$; f(–10) 190) _____

A) $\frac{1}{26}$ B) $-\frac{1}{12}$ C) $\frac{1}{30}$ D) $-\frac{1}{30}$

Answer: C
Objective: (14.4) Find the Value of a Function
final190 interactmath 14.3 #71

191) $f(x) = \frac{x - 10}{3x + 13}$; f(–4) 191) _____

A) 0 B) 14 C) 1 D) –14

Answer: D
Objective: (14.4) Find the Value of a Function
final191 interactmath 14.3 #71

192) $f(x) = \frac{x^2 + 3}{x^3 + 3x}$; f(5) 192) _____

A) $\frac{28}{125}$ B) $\frac{7}{32}$ C) $\frac{5}{28}$ D) $\frac{1}{5}$

Answer: D
Objective: (14.4) Find the Value of a Function
final192 interactmath 14.3 #71

Find the domain of the function.

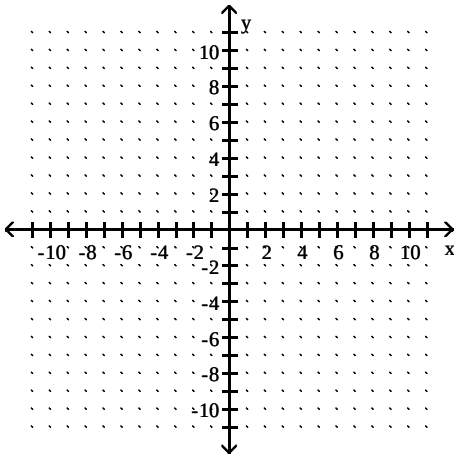
193) $f(x) = \frac{2x - 3}{x + 5}$ 193) _____

A) $\{x \mid x \neq -5\}$ B) $\left\{x \mid x \neq -5, \frac{3}{2}\right\}$ C) $\left\{x \mid x \neq \frac{3}{2}\right\}$ D) $\{x \mid x \neq 5\}$

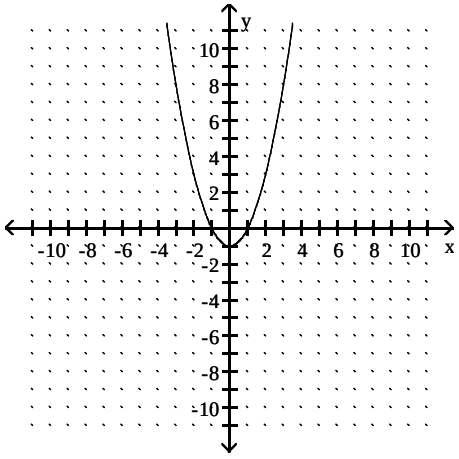
Answer: A
Objective: (14.4) Find the Domain of a Function
final193 interactmath 14.3 #75,79

Graph the function.

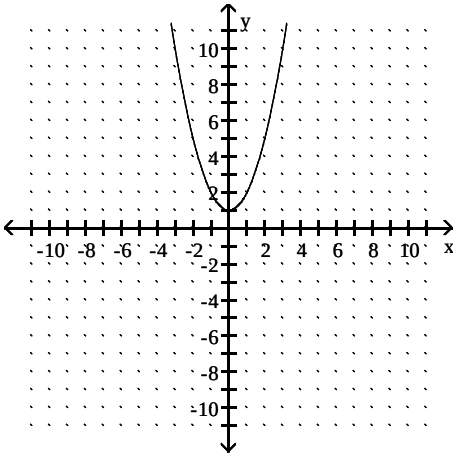
194) $h(x) = x^2 - 1$ 194) _____



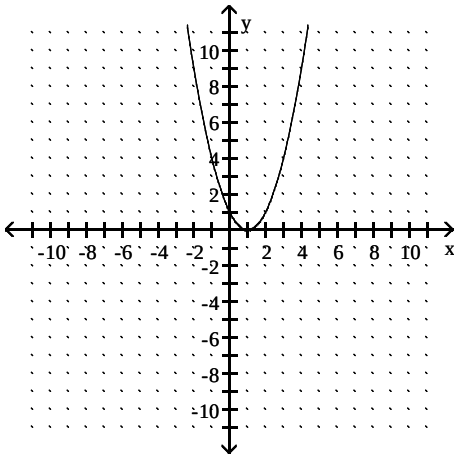
A)



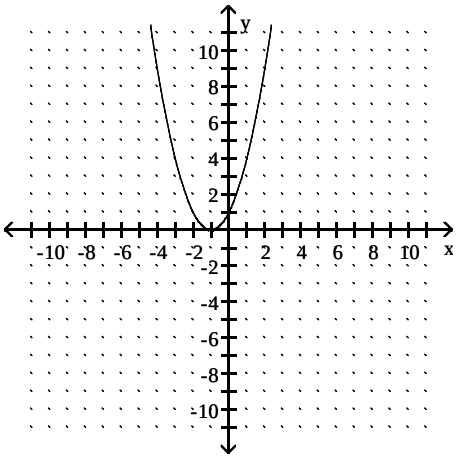
B)



C)



D)



Answer: A
Objective: (14.5) Graph a Function
fin194 interactmath14.1 #39

Solve the absolute value equation.

195) $|x + 1| = 7$ 195) _____

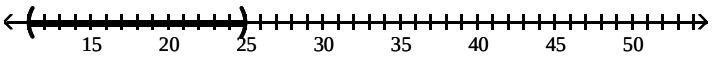
A) {–8, 6} B) {–6} C) {8, 6} D) ∅

Answer: A
Objective: (14.8) Solve Absolute Value Equations
fin195 interactmath 14.7 #45

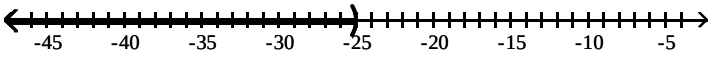
Solve the inequality. Graph the solution set, and state the solution set in interval notation.

196) $|x + 18| < 7$ 196) _____

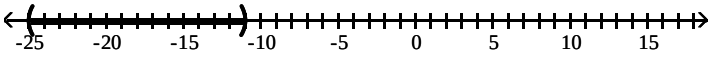
A) (11, 25)



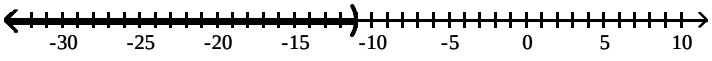
B) (–∞, –25)



C) (–25, –11)

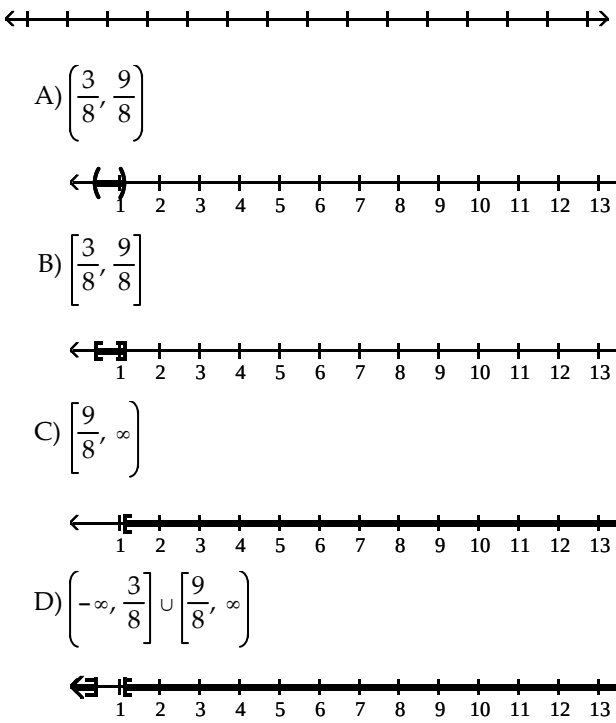


D) (–∞, –11)



Answer: C
Objective: (14.8) Solve Absolute Value Inequalities Involving < or ≤
fin196 interactmath 14.7 #67

197) $|8k - 6| \geq 3$ 197) _____



Answer: D
Objective: (14.8) Solve Absolute Value Inequalities Involving > or ≥
fin197 interactmath 14.7 #79

Evaluate the square root.

198) $\sqrt{\frac{64}{361}}$ 198) _____

A) $\frac{8}{19}$ B) $\frac{2}{5}$ C) $\frac{9}{19}$ D) $\frac{8}{45}$

Answer: A
Objective: (15.2) Evaluate Square Roots of Perfect Squares
fin198 interactmath15.4 quick check 15.4.21

Evaluate the expression, if possible.

199) $16^{1/4}$ 199) _____

A) 16 B) 32 C) 8 D) 2

Answer: D
Objective: (15.3) Evaluate Expressions of the Form a^(1/n)
fin199 interactmath 15.2 #59,63

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

200) $\sqrt{300k^7q^8}$ 200) _____

A) $10k^3q^4\sqrt{3}$ B) $10k^7q^8\sqrt{3k}$ C) $10k^3q^4\sqrt{3k}$ D) $10q^4\sqrt{3k^7}$

Answer: C
Objective: (15.4) Use the Laws of Exponents to Simplify Radical Expressions
fin200 interactmath 15.4 #55

201) $\sqrt[3]{343x^4y^5}$ 201) _____

A) $7xy\sqrt{xy^2}$ B) $7xy\sqrt[3]{xy}$ C) $7xy\sqrt[3]{xy^2}$ D) $3xy\sqrt[3]{xy^2}$

Answer: C
Objective: (15.4) Use the Laws of Exponents to Simplify Radical Expressions
fin201 interactmath 15.4 #57

Use the product rule to simplify the expression. Assume that the variables can be any real number.

202) $\sqrt{48}$ 202) _____

A) 12 B) $4\sqrt{3}$ C) 6 D) $3\sqrt{4}$

Answer: B
Objective: (15.5) Use the Product Property to Simplify Radical Expressions
fin202 interactmath 15.4 #37

203) $\sqrt[3]{32}$ 203) _____

A) $2\sqrt[3]{8}$ B) 2 C) $2\sqrt[3]{4}$ D) 8

Answer: C
Objective: (15.5) Use the Product Property to Simplify Radical Expressions
fin203 interactmath 15.4 #39

204) $\sqrt[3]{-64a^8b^5}$ 204) _____

A) $-4a^2b\sqrt[3]{a^2b^2}$ B) $4\sqrt{a^2b^2}$ C) $4ab\sqrt[3]{a^3b^3}$ D) $4ab\sqrt[3]{a^2b^2}$

Answer: A
Objective: (15.5) Use the Product Property to Simplify Radical Expressions
fin204 interactmath 15.4 #43

Evaluate the radical function at the indicated value.

205) $f(x) = \sqrt{2x - 1}$ 205) _____

f(13)

A) 25 B) 26 C) 5 D) 5.1

Answer: C
Objective: (15.8) Evaluate Functions Whose Rule Is a Radical Expression
final205 interactmath 15.7 #11

Solve the equation.

206) $\sqrt{2x} = 6$ 206) _____

A) $\{3\}$ B) {72} C) {12} D) $\{18\}$

Answer: D
Objective: (15.9) Solve Radical Equations Containing One Radical
final206 interactmath 15.8 #13

207) $\sqrt{x + 5} = 6$ 207) _____

A) {41} B) {121} C) {36} D) {31}

Answer: D
Objective: (15.9) Solve Radical Equations Containing One Radical
final207 interactmath 15.8 #15

208) $\sqrt{18y - 9} = y + 4$ 208) _____

A) {-4} B) {3} C) {-5} D) {5}

Answer: D
Objective: (15.9) Solve Radical Equations Containing One Radical
fin208 interactmath 15.8 #41

Add or subtract.

209) $(2 - 7i) + (6 + 5i)$ 209) _____

A) $-8 + 2i$ B) $8 - 2i$ C) $8 + 2i$ D) $-4 + 12i$

Answer: B
Objective: (15.10) Add or Subtract Complex Numbers
fin209 interactmath 15.9 #43

210) $(3 + 6i) - (-9 + i)$ 210) _____

A) $12 + 5i$ B) $12 - 5i$ C) $-12 - 5i$ D) $-6 + 7i$

Answer: A
Objective: (15.10) Add or Subtract Complex Numbers
fin210 interactmath 15.9 #45

Multiply. Write the result in the form a + bi.

211) $(6 - 3i)(5 + 9i)$ 211) _____

A) $-27i^2 + 39i + 30$ B) $57 - 39i$ C) $57 + 39i$ D) $3 - 69i$

Answer: C
Objective: (15.10) Multiply Complex Numbers
fin211 interactmath 15.9 #55

Divide.

212) $\frac{9 + 5i}{9 + 4i}$ 212) _____

A) $\frac{61}{65} + \frac{9}{65}i$ B) $\frac{101}{97} + \frac{9}{97}i$ C) $\frac{61}{97} - \frac{81}{97}i$ D) $\frac{101}{65} + \frac{9}{65}i$

Answer: B
Objective: (15.10) Divide Complex Numbers
fin212 interactmath 15.9 #91,93

Use the square root property to solve the equation.

213) $x^2 = 196$ 213) _____

A) $\{-14, 14\}$ B) $\{-15, 15\}$ C) $\{14\}$ D) $\{98\}$

Answer: A
Objective: (16.2) Solve Quadratic Equations Using the Square Root Property
fin213 interactmath 16.1 #19

214) $x^2 - 3 = 0$ 214) _____

A) $\left\{\frac{3}{2}\right\}$ B) $\{9\}$ C) $\{-\sqrt{3}, \sqrt{3}\}$ D) $\{\sqrt{3}\}$

Answer: C
Objective: (16.2) Solve Quadratic Equations Using the Square Root Property
fin214 interactmath 16.1 #21

215) $(x - 7)^2 = 4$ 215) _____

A) $\{9, 5\}$ B) $\{2, -2\}$ C) $\{11\}$ D) $\{5, -9\}$

Answer: A
Objective: (16.2) Solve Quadratic Equations Using the Square Root Property
fin215 interactmath 16.1 quick check 16.1.7

216) $(x + 4)^2 = 13$ 216) _____

A) $\{9\}$ B) $\{-\sqrt{13}, \sqrt{13}\}$
C) $\{-4 - \sqrt{13}, -4 + \sqrt{13}\}$ D) $\{4 - \sqrt{13}, 4 + \sqrt{13}\}$

Answer: C
Objective: (16.2) Solve Quadratic Equations Using the Square Root Property
fin216 interactmath 16.1 #37

Solve the equation by completing the square.

217) $x^2 + 4x - 45 = 0$ 217) _____

A) {–5, 9} B) $\{\sqrt{7}, -1\}$ C) {5, –9} D) {–36, –9}

Answer: C
Objective: (16.2) Solve Quadratic Equations by Completing the Square
fin217 interactmath 16.1 #53,55

Use the quadratic formula to solve the equation.

218) $x^2 + 12x + 35 = 0$ 218) _____

A) {7, – 5} B) {7, 5} C) {– 7, – 5} D) {35, 0}

Answer: C
Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula
fin218 interactmath 16.2 #23

219) $x^2 + 6x - 7 = 0$ 219) _____

A) {7, 1} B) {7, –1} C) {– 7, 1} D) {–7, 0}

Answer: C
Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula
fin219 interactmath 16.2 #23

220) $x^2 - 14x + 49 = 0$ 220) _____

A) {–7} B) {–7, 7} C) {7} D) {–7 – i, –7 + i}

Answer: C
Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula
fin220 interactmath 16.2 #23

221) $x^2 + 12x + 14 = 0$ 221) _____

A) $\{6 + \sqrt{22}\}$ B) $\{6 - \sqrt{14}, 6 + \sqrt{14}\}$
C) $\{-6 - \sqrt{22}, -6 + \sqrt{22}\}$ D) $\{-12 + \sqrt{14}\}$

Answer: C
Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula
fin221 interactmath 16.2 #33,51,57

222) $x^2 + 12x + 45 = 0$ 222) _____

A) {–6 – 9i, –6 + 9i} B) {–3, –9} C) {–6 – 3i, –6 + 3i} D) {–6 + 3i}

Answer: C
Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula
fin222 interactmath 16.2 quick check 16.2.8

223) $3x^2 - 5x - 8 = 0$ 223) _____

A) $\left\{\frac{8}{3}, -1\right\}$ B) $\left\{\frac{3}{8}, 1\right\}$ C) $\left\{\frac{3}{8}, -1\right\}$ D) $\left\{\frac{3}{8}, 0\right\}$

Answer: A
Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula
fin223 interactmath 16.2 #25

224) $4x^2 + 10x = -1$ 224) _____

A) $\left\{\frac{-10 - \sqrt{21}}{4}, \frac{-10 + \sqrt{21}}{4}\right\}$ B) $\left\{\frac{-5 - \sqrt{21}}{4}, \frac{-5 + \sqrt{21}}{4}\right\}$
C) $\left\{\frac{-5 - \sqrt{21}}{8}, \frac{-5 + \sqrt{21}}{8}\right\}$ D) $\left\{\frac{-5 - \sqrt{29}}{4}, \frac{-5 + \sqrt{29}}{4}\right\}$

Answer: B
Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula
fin224 interactmath 16.2 #31

225) $3x^2 + 10x + 4 = 0$ 225) _____

A) $\left\{\frac{-5-\sqrt{13}}{3}, \frac{-5+\sqrt{13}}{3}\right\}$

B) $\left\{\frac{-5-\sqrt{13}}{6}, \frac{-5+\sqrt{13}}{6}\right\}$

C) $\left\{\frac{-5-\sqrt{37}}{3}, \frac{-5+\sqrt{37}}{3}\right\}$

D) $\left\{\frac{-10-\sqrt{13}}{3}, \frac{-10+\sqrt{13}}{3}\right\}$

Answer: A

Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula

fin225 interactmath16.2 #31

226) $4x^2 + 1 = 3x$ 226) _____

A) $\left\{\frac{3-i\sqrt{7}}{8}, \frac{-3+i\sqrt{7}}{8}\right\}$

B) $\left\{\frac{-3-i\sqrt{7}}{8}, \frac{3+i\sqrt{7}}{8}\right\}$

C) $\left\{\frac{3-i\sqrt{7}}{8}, \frac{3+i\sqrt{7}}{8}\right\}$

D) $\left\{\frac{-3-i\sqrt{7}}{8}, \frac{-3+i\sqrt{7}}{8}\right\}$

Answer: C

Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula

fin226 interactmath 16.2 #35

227) $x^2 + 10x + 34 = 0$ 227) _____

A) $\{-5 + 3i\}$ B) $\{-5 - 9i, -5 + 9i\}$ C) $\{-2, -8\}$ D) $\{-5 - 3i, -5 + 3i\}$

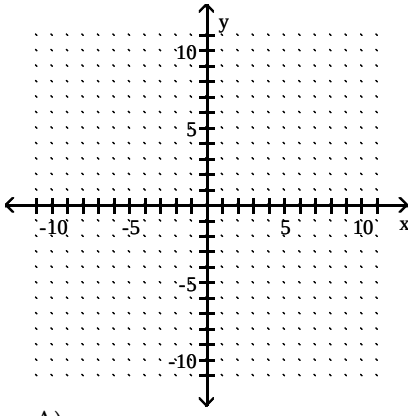
Answer: D

Objective: (16.3) Solve Quadratic Equations Using the Quadratic Formula

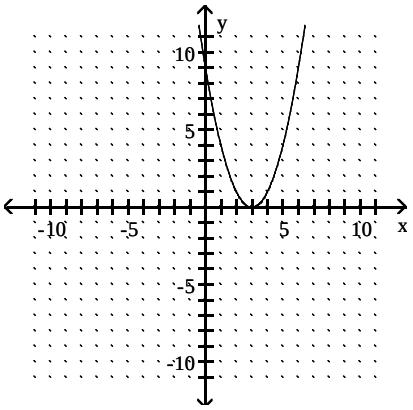
fin227 interactmath 16.2 quick check 16.2.8

Sketch the graph of the quadratic function.

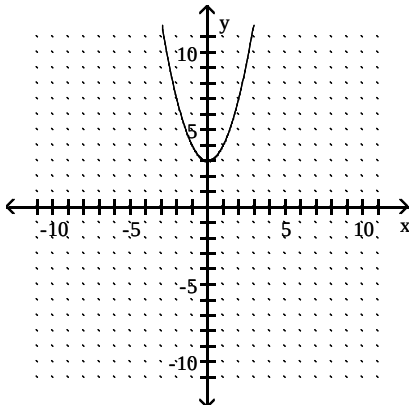
228) $f(x) = x^2 + 3$ 228) _____



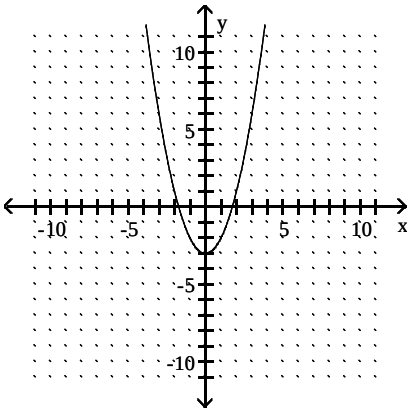
A)



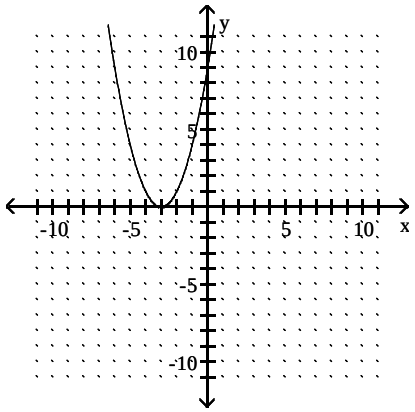
B)



C)



D)



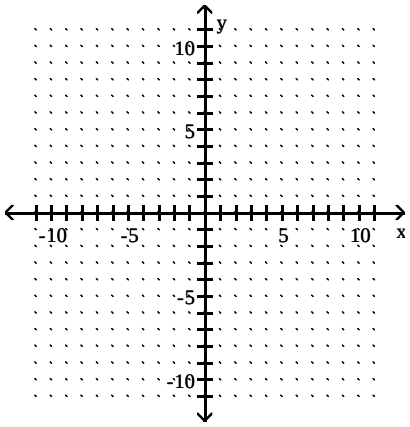
Answer: B

Objective: (16.5) Graph Quadratic Functions of the Form f(x) = x^2 + k

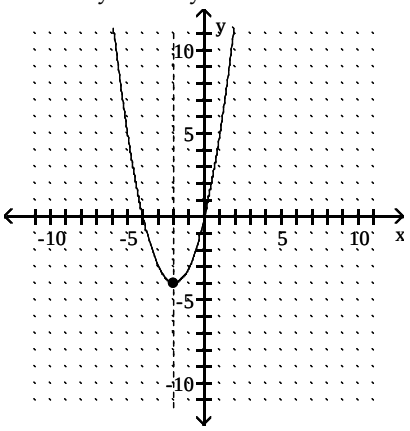
fin228 interactmath 16.4 #27,29

Sketch the graph of the quadratic function. Identify the vertex and axis of symmetry.

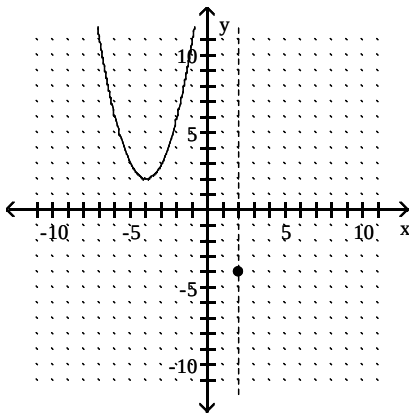
229) $f(x) = (x + 2)^2 - 4$ 229) _____



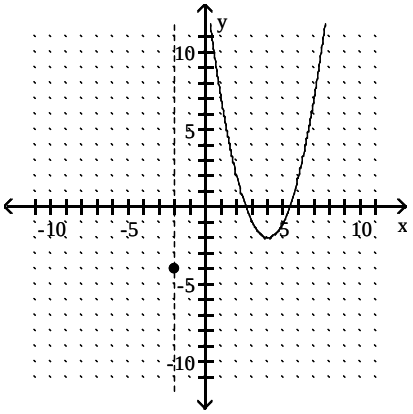
A) vertex: (– 2, – 4)
axis of symmetry: x = – 2



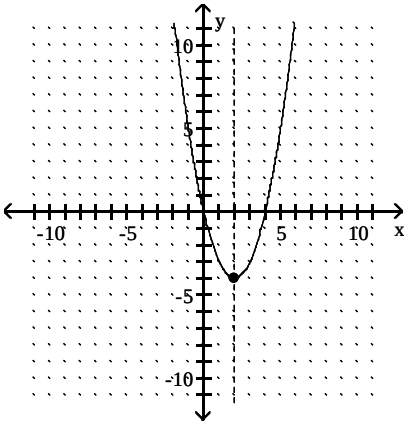
B) vertex: (2, – 4)
axis of symmetry: x = 2



C) vertex: (– 2, – 4)
axis of symmetry: x = – 2



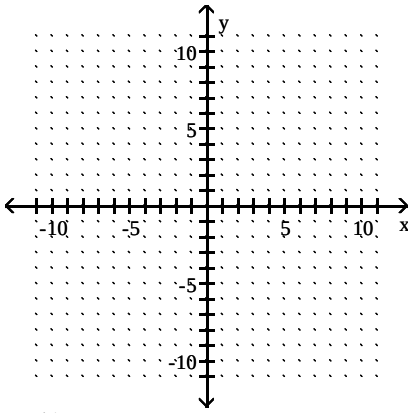
D) vertex: (2, – 4)
axis of symmetry: x = 2



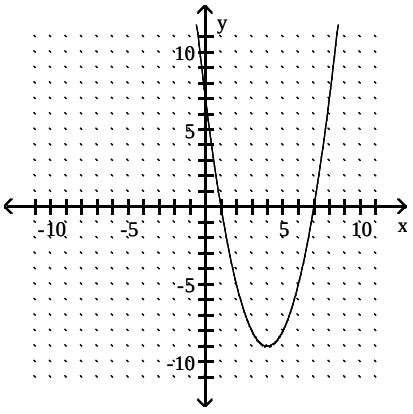
Answer: A
Objective: (16.5) Graph Quadratic Functions of the Form f(x) = (x – h)^2
fin229 interactmath 16.4 #41

Graph the quadratic function.

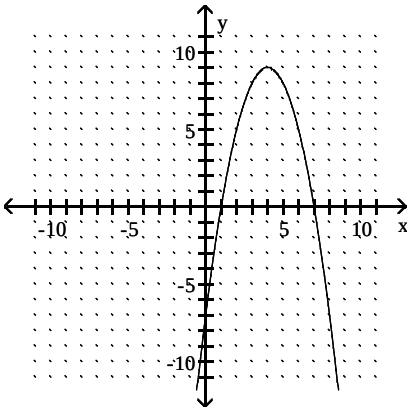
230) $f(x) = x^2 - 8x + 7$ 230) _____



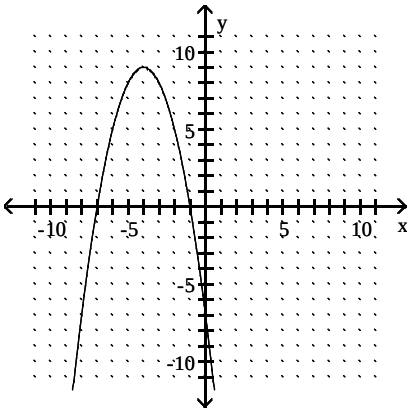
A)



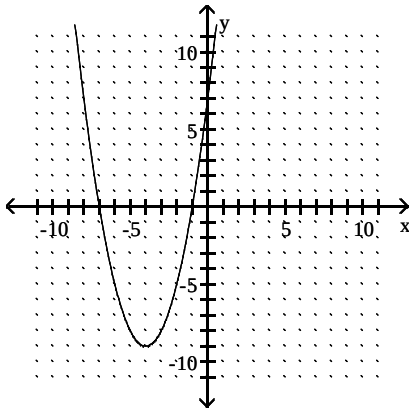
B)



C)



D)

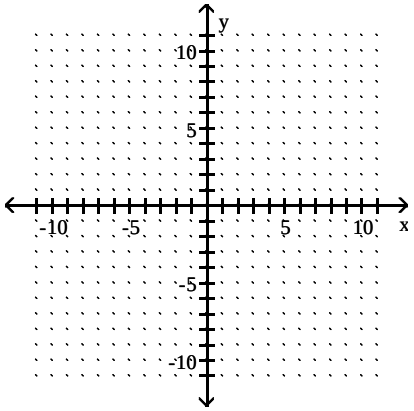


Answer: A

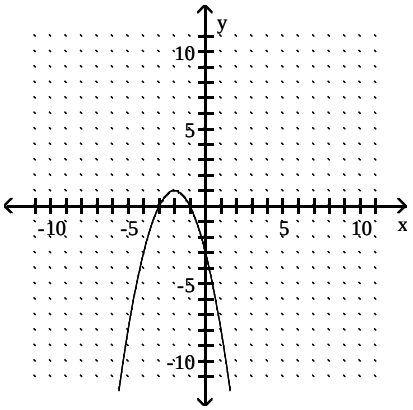
Objective: (16.5) Graph Quadratic Functions of the Form f(x) = ax^2 + bx + c

fin230 interactmath 16.5 #31

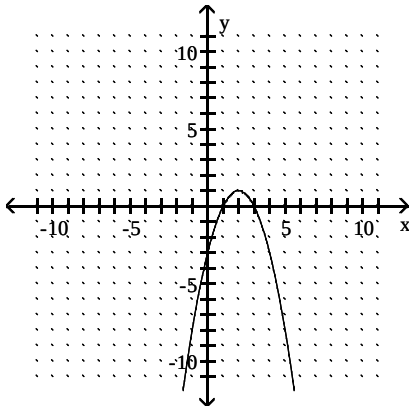
231) $f(x) = -x^2 + 4x - 3$ 231) _____



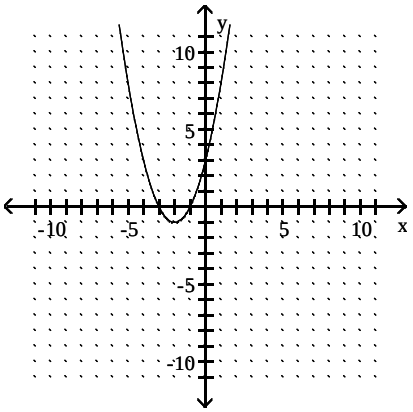
A)



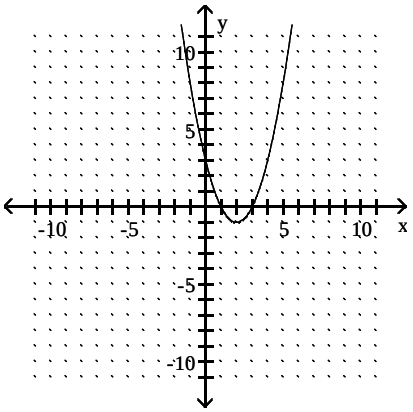
B)



C)



D)

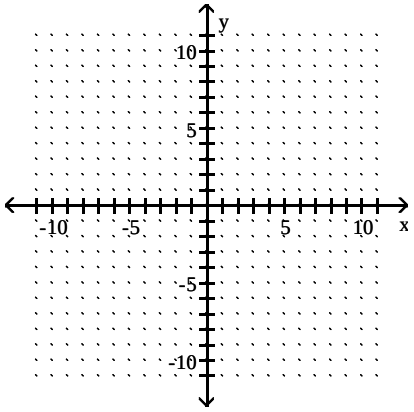


Answer: B

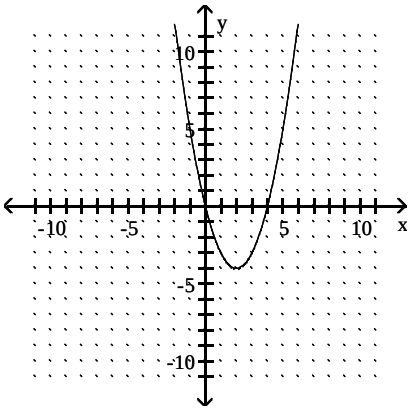
Objective: (16.5) Graph Quadratic Functions of the Form f(x) = ax^2 + bx + c

fin231 interactmath 16.5 #35

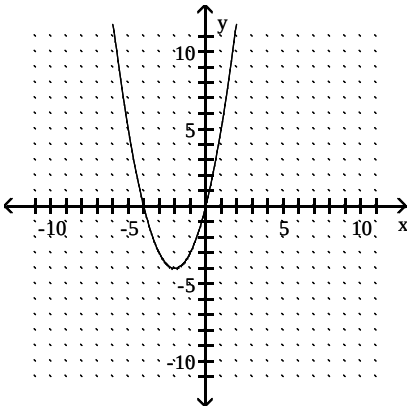
232) $f(x) = x^2 + 4x$ 232) _____



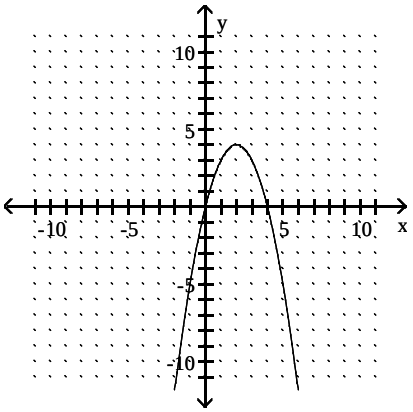
A)



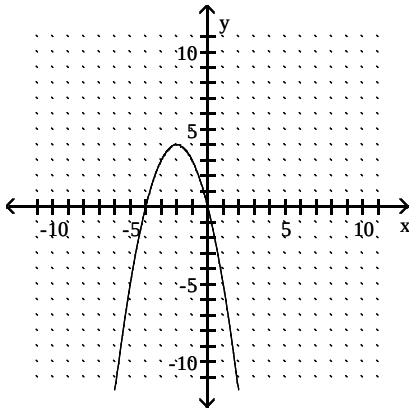
B)



C)



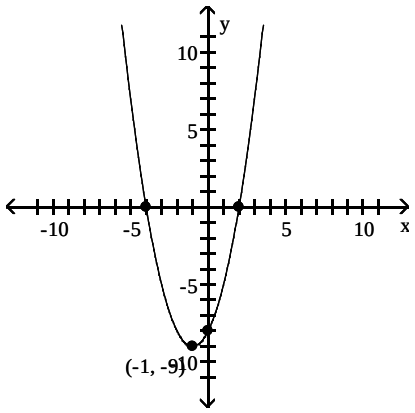
D)



Answer: B
Objective: (16.5) Graph Quadratic Functions of the Form f(x) = ax^2 + bx + c
fin232 interactmath 16.5 #55

Determine the quadratic function whose graph is given.

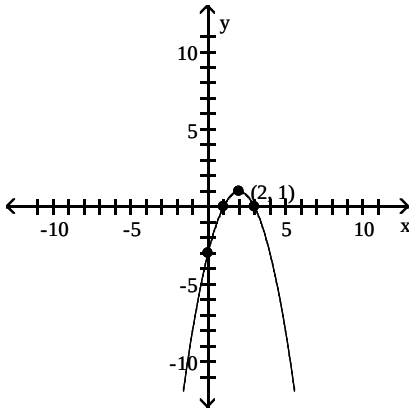
233) 233) _____



A) $f(x) = x^2 + 2x + 8$
B) $f(x) = x^2 + 2x - 8$
C) $f(x) = x^2 - 2x - 8$
D) $f(x) = -x^2 + 2x - 8$

Answer: B
Objective: (16.5) Find Quadratic Function from Its Graph
fin233 interactmath 16.5 #23

234) 234) _____



A) $f(x) = -x^2 + 4x + 3$

B) $f(x) = x^2 + 4x + 3$

C) $f(x) = -x^2 + 4x - 3$

D) $f(x) = -x^2 - 4x - 3$

Answer: C

Objective: (16.5) Find Quadratic Function from Its Graph

fin234 interactmath 16.5 #27

Answer Key
Testname: AATFM0320234FININTER

1) A
2) A
3) B
4) B
5) B
6) C
7) C
8) C
9) A
10) A
11) A
12) C
13) D
14) B
15) C
16) D
17) C
18) B
19) D
20) C
21) B
22) D
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24) A
25) C
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30) D
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32) A
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37) C
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47) C
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