

Page 1 Answers

8-1

- 24. $-2y^2 + 5y$; quadratic binomial
- 25. $-2q + 7$; linear binomial
- 26. $x^2 - 3x + 4$; quadratic trinomial
- 27. $-7x^2 - 4x + 4$; quadratic trinomial
- 28. $-3c^7 + 8c^3 + c$; seventh degree trinomial
- 29. $3z^4 - 2z^2 - 5z$; fourth degree trinomial

8-2

- 21. $3(3x - 2)$
- 22. $t(t + 8)$
- 23. $7(2n^3 - 5n^2 + 4)$
- 24. $5(k^3 + 4k^2 - 3)$
- 25. $2x(7x^2 - x + 4)$
- 26. $g(g^3 + 24g^2 + 12g + 4)$

8-3

- 8. $x^2 + 11x + 28$
- 9. $y^2 + 5y - 24$
- 10. $m^2 - m - 42$
- 11. $c^2 - 15c + 50$
- 12. $2r^2 - r - 3$
- 13. $6x^2 + 13x - 28$

1-7

- 25. $\frac{2}{5}x + \frac{7}{5}$
- 26. $\frac{17}{4} + \frac{5}{4}n$
- 27. $\frac{8}{3} - 3x$
- 28. $2y - 6$
- 33. $-20 - d$
- 34. $5 + 4y$
- 35. $-9 + 7c$
- 36. $x - 15$

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8-5

14. $(y + 5)(y + 1)$

15. $(t + 2)(t + 8)$

16. $(x + 8)(x + 7)$

17. $(n - 7)(n - 8)$

18. $(r - 8)(r - 3)$

19. $(q - 6)(q - 2)$

8-6

14. $(5z - 1)(z + 4)$ **15.** $(2k + 3)(k - 8)$

16. $(3t + 5)(2t - 1)$ **17.** $(3x - 4)(x + 9)$

18. $(4w + 3)(w - 2)$ **19.** $(2d + 5)(2d - 7)$

8-7

24. $(w + 12)(w - 12)$

25. $(a + 7)(a - 7)$

26. $(y + 11)(y - 11)$

27. $(t + 5)(t - 5)$

28. $(k + 8)(k - 8)$

29. $(m + 15)(m - 15)$

8-8

13. $(5q^2 + 1)(3q + 8)$

14. $(2y^2 + 1)(7y + 4)$

15. $(7z^2 + 8)(2z - 5)$

16. $(w^2 + 1)(11w - 9)$

17. $(2m + 1)(2m - 1)(2m + 3)$

18. $(3k^2 - 10)(4k - 9)$

8-7

9. $(h + 4)^2$ **10.** $(v - 5)^2$

17. $(3n - 7)^2$

24. $(w + 12)(w - 12)$

31. $(9r + 1)(9r - 1)$

35. $(3n + 20)(3n - 20)$

Page 2 Answers

1-8

27. $115d = 690$

2-1

26. 8 **27.** -4 **28.** 29 **29.** 0.16

34. 84 **35.** 175 **36.** 91

37. -117

2-3

1. $4\frac{11}{15}$

2. -7

3. 2

4. 2

2-4

21. 25

22. 7

23. -37

24. 1

3-3

50. $\frac{-4.5}{9} > \frac{9p}{9}$ Div. Prop. of Ineq.
 $-0.5 > p$ Simplify.

51. $3(-1) \geq 3\left(\frac{t}{3}\right)$ Mult. Prop. of Ineq.
 $-3 \geq t$ Simplify.

52. $\frac{4}{3}\left(\frac{3}{4}n\right) < \frac{4}{3}(4)$ Mult. Prop. of Ineq.
 $n < \frac{16}{3}$ Simplify.

53. $2(0.5) \leq 2\left(\frac{1}{2}c\right)$ Mult. Prop. of Ineq.
 $1 \leq c$ Simplify.

3-7

17. $r = 13$ or $r = 3$

18. $c = 2$ or $c = -10$

19. $g = -1$ or $g = -5$

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5-2

9. no

10. no

11. yes; -2

5-5

8. 9, 9

9. 2, -1

10. $-\frac{7}{3}$, $\frac{7}{3}$

11. $-\frac{20}{3}$, 4

12. 3, -21

13. 1.5, -2.5

6-4

7. 40 bicycles

11. 4 ft/s; 2 ft/s

2-5

19. $x = \frac{p}{m+n}$

20. $x = \frac{c}{a-1}$

21. $x = \frac{t}{r+s}$

22. $x = by + v$

23. $x = \frac{S-C}{C}$

24. $x = \frac{ay}{b}$

Page 3 Answers

2-2

- 11.** -12 **12.** 5 **13.** -1
14. -50

2-7

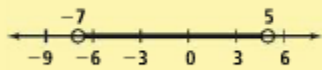
- 31.** $-6\frac{2}{3}$ **32.** 23 **30.** 13.2
33. -5
34. 2.5 h

3-4

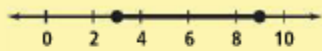
- 9.** $f \leq 3$
10. $n > -2.5$
11. $y > -2$
15. $5s \geq 250; s \geq 50$ mph

3-6

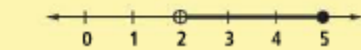
11. $-7 < k < 5$



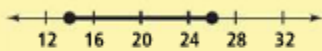
12. $3 \leq y \leq 9$



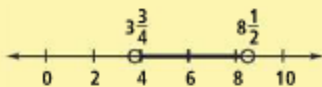
13. $2 < p \leq 5$



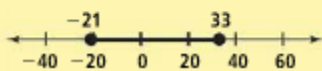
14. $14 \leq k \leq 26$



15. $3\frac{3}{4} < x < 8\frac{1}{2}$



16. $-21 \leq q \leq 33$



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9-3

8. ± 3 **9.** no solution
10. 0

9-4

14. $-10, -1$ **15.** $-8, 4$
16. 5, 9

9-5

7. 81 **8.** 121
9. 225
 289
 14. $-3.83, 7.83$
15. $-10.24, -5.76$ **16.** $-5, 7$

9-6

7. $-1.5, -1$
8. $-6, 2.8$

1-9

8. yes **9.** no **10.** no

Page 4 Answers

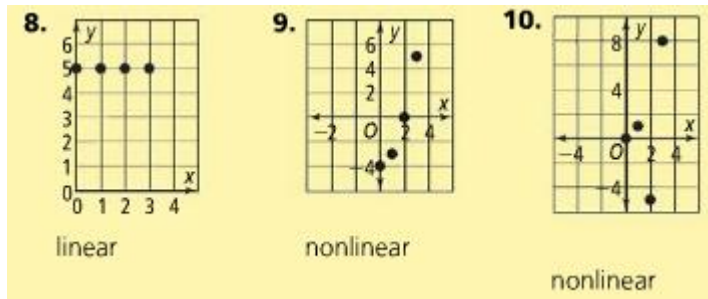
4-2

8.) Linear; $y = 3x + 5$

9.) Linear; $y = 5x - 3$

10.) Linear; $y = -11x + 43$

4-3



6-1

1.) $x = -2$; intersection at $(-2, 1)$

2.) $x = 2$; intersection at $(2, -2)$

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6-5

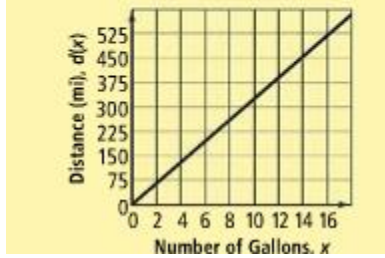
32. $y \geq -3x + 3$ **33.** $y > \frac{3}{2}x - 3$
34. $x < 3$

6-6

7. yes **8.** no **9.** no

4-6

- 18.** $\{-11, -9, -7, -5, -3\}$
19. $\{-39, -7, 1, 5, 21\}$
22. $0 \leq x \leq 17, 0 \leq d(x) \leq 544$



Page 5 Answers

4-7

30. $A(1) = 1.1; A(n) = A(n - 1) + 0.8$

31. $A(1) = 99; A(n) = A(n - 1) - 11$

32. $A(1) = 23; A(n) = A(n - 1) + 15$

4-1

5. Number of pounds, total cost; as the number of pounds increases, the total cost goes up, at first quickly and then more slowly.

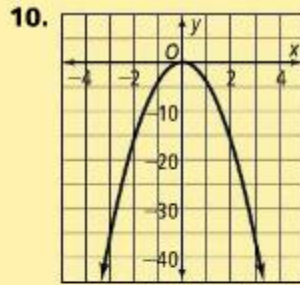
6. Time, grass height; the grass grows and you cut it, then it grows again and you cut it. This is repeated three times.

7. Area painted, paint in can; the more you paint, the less paint left in the can. You are using the paint at a constant rate.

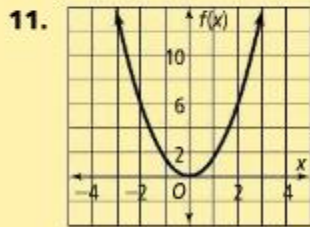
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9-1

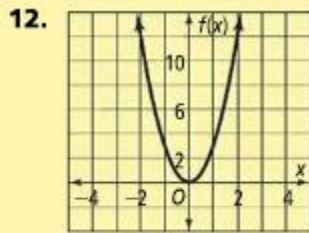
- 7. (2, 3); maximum
- 8. (-3, -2); minimum
- 9. (2, 0); minimum



domain: all real numbers; range:
 $y \leq 0$



domain: all real numbers; range:
 $f(x) \geq 0$



domain: all real numbers; range:
 $f(x) \geq 0$

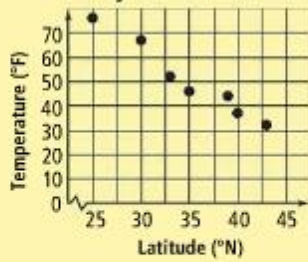
5-1

- 1. Rate of change: 40 mi/hr
 - 2. *** Do not worry about this problem ***
-

Page 6 Answers

5-7

1. Average Maximum Daily Temperature in January for Northern Latitudes



negative correlation

2-3. Answers may vary. Samples are given.

2. $y = -2x + 120$

3. about 20°F

12. There is likely a correlation and a causal relationship, because the more you study, the better prepared you are for the test.

13. no correlation likely

14. no correlation likely