

Algebra 2 Regular Summer Packet Answer Key

(All Work MUST be shown to receive credit!)

Chapter 2

1. no
2. yes
3. yes
4. no
5. no
6. yes
7. no
8. no
9. no
10. yes
11. yes
12. yes
13. -5
14. $-2/13$
15. $1/2$
16. $1/7$
17. $-11/2$
18. 2
19. -2
20. 0
21. $-13/9$
22. -1
23. $-14/9$
24. $-23/11$
25. $7/12$
26. $-9/8$
27. $-1/4$
28. $y = -2x + 5$
29. $y = -3x - 12$
30. $y = -(2/3)x + 8$
31. $y = -(13/7) + 13$
32. $y = (1/3)x - 2$
33. $y = -12x - 8$
34. $y = -2x - 14$
35. $y = -x - 2$
36. $y = -3x + 7$
37. $y = -2x - 5$
38. $y = (1/2)x + 2$
39. $y = -(1/3)x + 1.5$
40. $y = -x + 3$
41. $y = -3x - 12$
42. $y = 4x - 21$
43. $y = -2x$
44. $y = 5x + 8$
45. $y = 3x - 1$
46. $y = -x + 4$
47. $y = -6x - 21$
48. $y = 2x + 8$
49. $y = 2x - 29$
50. $y = (1/3)x - 5/3$
51. $y = -(5/12)x$

Chapter 4

1. $\sqrt{73} = 8.5$
2. $\sqrt{170} = 13.04$
3. 4
4. 5
5. $\sqrt{137} = 11.7$
6. $\sqrt{65} = 8.06$
7. $2x + 12y$
8. $-m + 2q$
9. $-5p - 9t$
10. $27x - 25y$
11. $9x^2y - 5xy^2$
12. $-2x^2 + 3xy$
13. 6
14. 6
15. -10
16. -5
17. 0
18. 0
19. 10
20. No solution
21. 2
22. $x < -5$
23. $c < 28$
24. $m < 26$
25. $x < 9$
26. $z > -8$
27. $x \geq 3$
28. $x < -11$
29. $m \geq 1$
30. $b > 3/5$
31. $x < 3/10$
32. $z \leq 1$
33. $t \leq -14/5$
34. $r > -6$
35. $x \geq -1$
36. $x \leq -7$
37. 7 and -17
38. 12 and -8
39. 2 and 8
40. 7 and -5
41. 14 and -20
42. -1 and $9/5$
43. 7 and -4
44. $12/7$ and -4
45. -2 and $9/2$
46. $-4/3$ and -4
47. $x \geq 10$ or $x \leq -36$
48. $x > 14$ or $x < -2$
49. $-6 \leq x \leq 10$
50. $x \leq 8$ or $x \geq 22$
51. $12 < x < 20$
52. $-2/3 < x < 2$
53. $-3 \leq x \leq 7$
54. $-5/3 \leq x \leq 3$
55. $x \leq -2$ or $x \geq 4$
56. $x < -8$ or $x > 5$
57. $-6 < x < 2$
58. $x < -2$ or $x > 5$
59. $x \leq -6$ or $x \geq 2$
60. $-1 < x < 23/5$
61. $x < -2$ or $x > 20/11$
62. No solution
63. $x < -8/3$ or $x > 4$
64. $-3 \leq x \leq 1/3$
65. All real numbers
66. $-2 \leq x \leq 0$

Chapter 6

1. $\frac{4}{5}$
2. $\frac{7}{4}$
3. $\frac{25}{27}$
4. $\frac{11}{4}$
5. $\frac{103}{45}$
6. $\frac{11}{9}$
7. $\frac{4}{1}$
8. $\frac{5}{4}$
9. $\frac{1}{1}$
10. 3
11. -3
12. 6
13. -4
14. $\frac{13}{4}$
15. $\frac{7}{6}$
16. -1
17. 2
18. $\frac{7}{9}$
19. $\frac{27}{2}$
20. -2
21. 8
22. 4
23. 9
24. 200
25. 12
26. $\frac{24}{5}$
27. $\frac{42}{17}$
28. $\frac{5}{9}$
29. $\frac{3}{2}$
30. 30
31. 4
32. 5
33. $\frac{95}{9}$
34. 5
35. -4
36. 9
37. -29
38. $-\frac{43}{2}$
39. $\frac{2}{3}$
40. -3
41. $-\frac{2}{3}$
42. 6 and -6

Chapter 8 (Answer must be in simplified radical form)

1. 11
2. $2\sqrt{13}$
3. $3\sqrt{5}$
4. $6\sqrt{2}$
5. $2\sqrt{10}$
6. $3\sqrt{3}$
7. $4\sqrt{5}$
8. $5\sqrt{2}$
9. $9\sqrt{3}$
10. $12\sqrt{2}$
11. $8\sqrt{5}$
12. 15
13. $6\sqrt{3}$
14. $2\sqrt{2}$
15. $8 - 2\sqrt{7}$
16. $4\sqrt{11}$
17. $\sqrt{5}$
18. $21\sqrt{2}$
19. $-16\sqrt{3}$
20. $5\sqrt{7}$
21. $4\sqrt{5}$
22. $13\sqrt{2}$
23. $21\sqrt{10}$
24. 330
25. 24
26. 36
27. $6\sqrt{14}$
28. 8
29. 112
30. 40
31. 180
32. 32
33. 192
34. 12
35. 125
36. 1,100
37. $(4\sqrt{3})/3$
38. $(5\sqrt{7})/7$
39. $\sqrt{2}$
40. $(2\sqrt{15})/5$
41. 1
42. $\sqrt{2}$
43. $(4\sqrt{6})/3$
44. $\sqrt{2}/2$
45. $(2\sqrt{3})/3$
46. $3/2$
47. $(9\sqrt{13})/26$
48. $\sqrt{2}/2$
49. $(3\sqrt{5})/5$
50. $(4\sqrt{10})/5$
51. $\sqrt{15}/5$
52. $\sqrt{6}/3$
53. 3 and -3
54. 25 and -25
55. 17 and -17
56. $\sqrt{10}$ and $-\sqrt{10}$
57. 4 and -4
58. $\sqrt{13}$ and $-\sqrt{13}$
59. 6 and -6
60. 8 and -8
61. 7 and -7
62. $\sqrt{10}$ and $-\sqrt{10}$
63. 3 and -3
64. $\sqrt{5}$ and $-\sqrt{5}$
65. 2 and -2
66. $\sqrt{2}$ and $-\sqrt{2}$
67. 1 and -1
68. $\sqrt{7}$ and $-\sqrt{7}$
69. $\sqrt{6}$ and $-\sqrt{6}$
70. 5 and -5
71. 4 and -4
72. 24 and -24
73. 13 and -13

Chapter 10

1. A/l
2. $\sqrt[3]{(3V)/(4\pi)}$
3. $(2A)/b$
4. $(2A)/h - b_2$
5. $(\sqrt{A\pi})/\pi$
6. $C/(2\pi)$
7. $\sqrt[3]{V}$
8. $(P - 2w)/2$
9. $V/(lw)$
10. $V/(\pi r^2)$
11. $(\sqrt{6S})/6$
12. $\sqrt{c^2 - a^2}$
13. $5 + x$
14. $x^2 + \sqrt{2}$
15. $2x - 14$
16. $3x - 6$
17. $x + 2 - 9x$
18. $x/2 + 3x$
19. $5x - 7 = 13; 4$
20. $2x - 16 = 10; 13$
21. $2x + 14x = 48; 3$
22. $x/2 = 3(x + 5); -6$
23. 36
24. 51 miles
25. 142
26. \$12.50
27. 25%
28. 22%
29. 400%
30. About 15%
31. 10
32. 25 meters
33. \$2.08
34. About 17%
35. $1/(2x)$
36. $2a^2$
37. x
38. 3
39. $(a + 2)/(a - 8)$
40. $(x + 3)/(6x - 1)$
41. $(7d - 1)/(3d + 4)$
42. $(y - 6)/(12 - y)$
43. $(9s - 1)/(s - 3)$
44. $(-5h + 1)/(h + 1)$
45. $(t - 1)/(t + 1)$
46. $(m - 2)/(m + 2)$