Summer Packet Solutions for Algebra II and Geometry

2.6

① $4x+9$

② $7m-2$

③ $-3y+22$

④ $-4a+5b$

⑤ $-6x-22$

⑥ $7m+6m+5$

⑦ $3x+8$

⑧ $2m-2$

⑨ $-4p+12q-14r$

⑩ $26x-6y$

2.7

① $-22x^2$

② $14x^2$

③ $-2x^2-2x$

④ $-18x^2+12x$

⑤ x^2+4x

⑥ $6.3x^2-50.4x$ or $3x^2-24x$

⑦ $10x^2+50x$

⑧ $7x^2-35x$

⑨ $-2x^2-2x$

⑩ x^2-8x

3.3

① $x=2$

② $t=6$

③ $y=4$

④ $x=5$

⑤ $x=5$

⑥ $z=6$

⑦ $s=16$

⑧ $w=9$

⑨ $f=-9$

⑩ $c=7$

⑪ $x=6$

⑫ $t=-81$

⑬ $x=\frac{1}{2}$

⑭ $x=4$

⑮ $j=5$

⑯ $k=-5$

3.4

1. $x=1$
2. $y=-8$
3. $a=-4$
4. $x=2$
5. $t=-9$
6. $x=1$
7. ~~$g=2.5$~~
8. $b=-1$
9. $w=2$
10. $p=2$

3.5

1. $x=-6$
2. $t=5$
3. $z=3$
4. $k=-13.5$
5. $x=4$
6. $m=2$
7. $h=3$
8. $N=5$
9. $t=3$
10. $c=-5$
11. $f=6$
12. $y=5\frac{2}{3}$

5.4

1. $m=3,\ b=-1$
2. $m=\frac{1}{2},\ b=2$
3. $m=-1,\ b=\frac{1}{2}$
4. $y=2x-1$
5. $y=\frac{1}{3}x-3$
6. $y=2x-1$
7. $y=-3x+2$
8. $y=\frac{1}{2}x+3$
9. $y=x-1$

5.6

1. $m=-\frac{1}{2}$
2. $m=-3$
3. $m=\frac{2}{3}$
4. $m=-4$
5. $y+4=3(x+1)$
6. $y+4=\frac{1}{2}(x-2)$
7. $x=-2$
8. $y-15=\frac{3}{2}(x-4)$
9. $y=-6$

6.5

1. $x = -12$ or 8
2. $x = 4$ or 14
3. $x = 1$ or 5
4. $x = 9$ or 15
5. $x = 4$ or 6
6. $x = -25$ or 11
7. $x = -5$ or 6
8. $x = \frac{7}{3}$ or 3
9. $x = -5$ or 4
10. $x = -18$ or 2
11. $x = -\frac{4}{5}$ or 4
12. $x = -3$ or 2.5

7.3

1. $x = 10, y = 15$
2. $(-1, 2)$
3. $(0.2, 8)$
4. $(4, -0.5)$
5. $(2, -1)$
6. $(17.5, -3.75)$

7.5

~~★~~ See Last page of solutions.

Pg. 86

11. $19,683$
12. 128
13. $100,000,000$
14. $-78,125$
15. $1,073,741,824$
16. $16,384$
17. $15a^5$
18. $-21c^3d^2$
19. $5s^3t^5$
20. $24p^7q^3$
21. $4m^5n^4$
22. $6a^6b^5c^2$

pg. 88

(9) $1,000,000$

(10) $32y^{15}$

(11) x^{12}

(12) $512q^{9}$

(13) cd^{8} ^{8}

(14) $81m^{2}n^{10}$

(15) $4e^{12}f^{3}$

(16) $16p^{20}r^{12}$

(17) $9y^{6}$

(18) $-g^{5}h^{20}$

(19) $-a^{4}b^{9}$

(20) $-432cd^{11}$ ^{18}

pg. 90

(9) xy^{2}

(10) $p^{4}qr^{2}$

(11) $-6g^{6}h^{2}$

(12) $-\frac{3xy^{2}z^{4}}{4}$

(13) $3s^{4}t^{3}$

(14) $4.2b^{3}c^{5}$

(15) $\frac{2r^{3}}{n}$

(16) $-343c^{6}m^{3}$

(17) $-5c$

(18) $d^{10}e^{12}$

8.4

(1) 1

(2) $\frac{1}{25}$

(3) 1

(4) $\frac{1}{4}$

(5) $\frac{1}{27}$

(6) 1

(7) $\frac{1}{125}$

(8) $\frac{1}{64}$

pg. 92

(9) a^{-2}

(10) c^{-5}

(11) y^{-3}

(12) m^{-9}

(13) p^{8}

(14) q^{-5}

(15) x^{-11}

(16) z^{3}

(17) t^{5}

(18) 3125

(19) x^{-5}

(20) $\frac{1}{3}$

(21) t^{-3}

(22) 1,048,576

(23) 25

(24) a^{-3}

(25) r^{3}

(26) $\frac{1}{1024}$

9.1

(1) $6b^2+b$

(2) $10c^2+c$

(3) $5b^3-3b^2+7b$

(4) $5y^3+5y^2+6y-1$

(5) $2r^3+6r^2+7r+6$

(6) $7m^3-5m^2-4m-5$

(7) $-3x^2+4x-3$

(8) $4x^2-2x+9$

(9) $3x-1$

(10) $7x^3+1$

9.3

1. $4x+20$
2. $5x-10$
3. $2x^2-2x$
4. $6x^2+2x$
5. $-5x^2+30$
6. $3x^2+9x$
7. x^2+5x+4
8. x^2+5x+6
9. $x^2+2x-15$
10. $2x^2+7x+6$
11. $3x^2-18x+15$
12. $12x^2-25x+12$

9.5

1. 1, 2, 3, 4, 6, 12
2. 1, 5, 7, 35
3. Prime
4. 1, 3, 19, 57
5. 1, 7, 11, 77
6. PRIME
7. $3m(m-7)$
8. $t(8t+15)$
9. $3(6p^2+7p+3)$
10. $4d(d^2-5d+2)$

Pg. 112

7. $(x-2)(x+1)$
8. $(x+4)(x-1)$
9. $(x+1)(x+3)$
10. $(x-3)(x-1)$
11. $(x+4)(x-2)$
12. $(x+5)(x-4)$
13. $(x+5)(x-3)$
14. Prime
15. $(x-4)(x+3)$
16. $(x+2)(x+4)$
17. $(x-2)(x-18)$
18. $(x+6)(x-4)$

pg. 114

(11) $\{-2, 6\}$

(12) $\{3\}$

(13) $\{2, 7\}$

(14) $\{-5, -1\}$

(15) $\{2, 5\}$

(16) $\{-6, 6\}$

(17) $\{-4\}$

(18) $\{-3, 4\}$

(19) $\{-\frac{1}{3}, \frac{1}{3}\}$

(20) $\{-\frac{1}{2}\}$

10.5

(1) $x = 4, 4$

(2) $x = -4, 6$

(3) $x = -3$

(4) $x = -5, 2$

(5) $x = -\frac{3}{2}, 2$

(6) $x = \frac{1+\sqrt{33}}{4}$ or $\frac{1-\sqrt{33}}{4}$

11.3

(1) $\frac{2t}{t-1}$, $t \neq 1$

(2) $\frac{m+3}{2(m-2)}$, $m \neq 2$

(3) $\frac{m}{2+3m}$, $m \neq -\frac{2}{3}$, $\neq 0$

(4) $\frac{3}{y+2}$, $m \neq -2$

(5) $\frac{3}{(x+1)}$, $x \neq -1$

(6) $\frac{4}{r-3}$, $r \neq 3$

11.4

(1) $2t$, $t \neq 0, 1$

(2) $\frac{2}{3}$, $a \neq 0, \frac{3}{2}$

(3) $\frac{c+3}{2}$, $c \neq -3$

(4) $\frac{4d}{d+5}$, $d \neq 0, -5, -3$

(5) $2(x-3)$, $x \neq -3$

(6) $y^2 - 1$, $y \neq -2$ or 2

Pg 134

(7) $\frac{13x}{20}$

(8) $\frac{37}{6b}$

(9) $-\frac{7}{12t}$

(10) $\frac{5m}{2(m-n)}$

(11) $\frac{c}{2(c-4)}$

(12) $\frac{3y^2+2y}{(y+2)(y-2)}$

11.5

(1) -6

(2) $-\frac{6}{13}$ and 2, $d \neq 0$

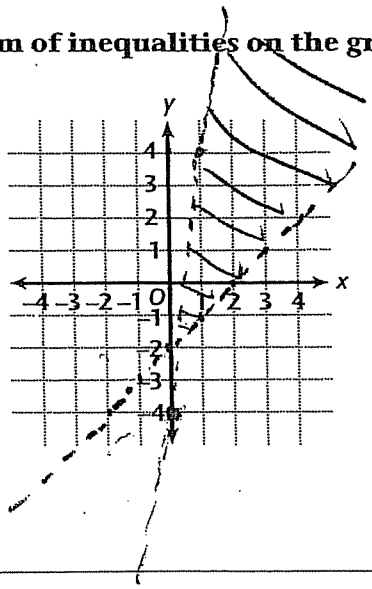
(3) 3, $h \neq 0, h \neq 6$

(4) -3, $x \neq 4, x \neq 2$

7.5

Graph each system of inequalities on the grid provided.

1. $\begin{cases} y < 8x - 4 \\ y > x - 2 \end{cases}$



2. $\begin{cases} y - 2x \geq 3 \\ 2y + x \geq -5 \end{cases}$

$y \geq -\frac{1}{2}x - 2.5$

$y \geq 2x + 3$