

Directions for completing the Accelerated Geometry
Summer Algebra Skills Packet
2018-19

Please print out the entire packet and **do not** wait to start completing it! Go through each page and make sure you know how to do each problem. These are the basic Algebra 1 skills that you should have in order to enroll in Accelerated Geometry. You should be able to do these calculations without a calculator. Make sure your work is neat and organized for each problem you complete.

As you are working through each problem, make note of any problems you do not understand as well as any questions you may have. I will spend some time each day during the first couple weeks of school answering your questions and addressing your concerns. I will not be collecting your packet. However, your first test is over the contents of this packet.

If you get stuck, you can go to the following sources for help.

<https://www.khanacademy.org/math/algebra> (Sign-up for a free account.)

<http://www.coolmath.com/algebra/04-factoring>

<http://www.algebrahelp.com/>

If you have any questions, you can email me at tbradfield@district70.org. I will check my email periodically throughout the summer.

Topics Included:

1. Review of Fractions
2. Order of Operations
3. Simplifying Radicals
4. Solving Multi-Step Equations
5. Multiplying Binomials
6. Factoring Polynomials
7. Slope of a line
8. Graphing and Naming lines
9. Solving Systems of Equations

FR Fractions review

Aim:

- Recall how to convert between mixed number and improper fractions
- Recall how to add, subtract, multiply and divide fractions

To start with (Get started on this immediately)

Fill in the missing numbers

$$\text{a) } \frac{2}{3} = \frac{6}{\quad} \quad \text{b) } \frac{7}{\quad} = \frac{28}{49} \quad \text{c) } \frac{19}{\quad} = \frac{380}{400}$$

Exercise FR

1) Convert each of these into an improper fraction

a	$1\frac{1}{4}$	b	$2\frac{3}{8}$	c	$8\frac{4}{5}$
d	$9\frac{2}{7}$	e	$10\frac{8}{9}$	f	$12\frac{6}{11}$

2) Convert each of these into mixed number fractions

a	$\frac{5}{3}$	b	$\frac{15}{4}$	c	$\frac{17}{6}$
d	$\frac{27}{10}$	e	$\frac{36}{11}$	f	$\frac{100}{9}$

3) Evaluate the following

a	$\frac{1}{3} + \frac{1}{3}$	b	$\frac{2}{7} + \frac{3}{7}$	c	$\frac{3}{4} + \frac{1}{5}$
d	$\frac{3}{7} + \frac{4}{9}$	e	$1\frac{3}{4} + 2\frac{2}{3}$	f	$6\frac{3}{8} + 2\frac{4}{5}$

4) Evaluate the following

a	$\frac{8}{9} - \frac{4}{9}$	b	$\frac{9}{10} - \frac{3}{10}$	c	$\frac{3}{4} - \frac{2}{7}$
d	$\frac{11}{15} - \frac{2}{3}$	e	$2\frac{3}{5} - 1\frac{2}{7}$	f	$10\frac{6}{7} - 4\frac{9}{10}$

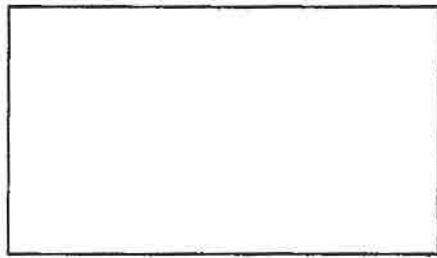
5) Evaluate the following (Simplifying where possible)

a	$\frac{1}{3} \times \frac{4}{5}$	b	$\frac{9}{10} \times \frac{7}{8}$	c	$\frac{2}{11} \times 3\frac{7}{15}$
d	$4\frac{2}{3} \times 1\frac{2}{5}$	e	$5\frac{1}{4} \times 4\frac{6}{7}$	f	$10\frac{1}{7} \times 6\frac{2}{3}$

6) Evaluate the following (Simplifying where possible)

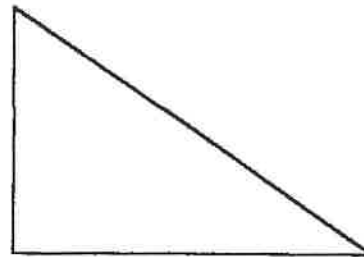
a	$\frac{1}{3} + \frac{1}{5}$	b	$\frac{5}{8} + \frac{2}{3}$	c	$7 + \frac{1}{2}$
d	$6 + \frac{1}{3}$	e	$1\frac{8}{9} + 5$	f	$4\frac{2}{7} + 3\frac{2}{3}$

7) Work out the areas and perimeters of the following shapes



$1\frac{3}{5} \text{ mm}$

$3\frac{2}{9} \text{ mm}$



$\frac{5}{11} \text{ m}$

$\frac{3}{4} \text{ m}$

8) Using the fact that $\pi = \frac{22}{7}$, find as a fraction the circumference and area of a circle with diameter $\frac{4}{5} \text{ cm}$.

9) Given that

$$a = \frac{3}{5} \quad b = \frac{4}{7} \quad c = 5\frac{2}{3} \quad d = \frac{23}{12}$$

a	$a + 2b$	b	$3c + 4d$	c	$c^2 - (a^2 + b^2)$
d	$a - b$	e	$b - a$	f	$4c - 3d$
g	ac	h	$2abd$	i	$2d^2 + 3c$
j	$\frac{a}{b}$	k	$\frac{b}{a}$	l	$\frac{c+d}{a}$

10) A train travels 150 miles in $2\frac{1}{2}$ hours. Calculate the average speed of the train.

SKILLS PRACTICE 6

For use with Section 1-4

Order of Operations

NAME _____

DATE _____

1. List the order in which operations in an expression are to be performed.
- _____

For each of the following expressions, evaluate using the correct order of operations.

2. $8 - 6 + 4 \times 2$ _____
3. $8 \times 6 - 4 \times 2$ _____
4. $8 \times (6 - 4) \times 2$ _____
5. $8 \times 6 + 4 \times 2$ _____
6. $8 \times 6 \div (4 \times 2)$ _____
7. $2^3 - 5 + 4$ _____
8. $12 + 6 - 4^2$ _____
9. $2^4 \times 5 - 3$ _____
10. $2^4 \times (5 - 3)$ _____
11. $2 \div 4 \times 6 + 8$ _____

Evaluate each of the following expressions for the given value of the variable.

12. x^2 if x is a. 6 _____
b. 0.2 _____
13. $x^2 + 3$ if x is a. 6 _____
b. 0.2 _____
14. $x^2 - 3x + 2$ if x is a. 4 _____
b. 5 _____
15. $4x^2 + 3x + 2$ if x is a. 3 _____
b. 5 _____
c. 0.2 _____

Solve.

16. 75% of _____ is 24.
17. $\frac{2}{3}$ of _____ is 81.
18. $12\frac{2}{3} - 10\frac{3}{4} =$ _____
19. $8.5 - 6 - 0.25 =$ _____
20. John mowed one third of a 1200 square foot lawn. Then he mowed four fifths of what remained. How many square feet of lawn remained unmowed after this?

Simplifying Radicals Worksheet 1**Simplify.**

1) $\sqrt{75}$

2) $\sqrt{16}$

3) $\sqrt{36}$

4) $\sqrt{64}$

5) $\sqrt{80}$

6) $\sqrt{30}$

7) $\sqrt{8}$

8) $\sqrt{18}$

9) $\sqrt{32}$

10) $\sqrt{12}$

11) $\sqrt{8}$

12) $\sqrt{108}$

13) $\sqrt{125}$

14) $\sqrt{50}$

15) $\sqrt{175}$

16) $\sqrt{28}$

17) $\sqrt{45}$

18) $\sqrt{72}$

19) $\sqrt{20}$

20) $\sqrt{150}$

Solutions of Equations

Name _____

Date _____ Period _____

Solve.

1. $\frac{x}{2} + 13 = 17$

8

2. $\frac{x}{4} - 3 = 15$

3. $\frac{x}{5} - 9 = 7$

4. $\frac{x}{3} - 8 = 13$

5. $\frac{x}{7} + 11 = 1$

6. $\frac{x}{4} + 13 = 6$

7. $\frac{x}{13} + 11 = 9$

8. $\frac{x}{15} + 23 = 27$

9. $\frac{x}{5} - 18 = -11$

10. $\frac{x}{2} - 13 = -9$

11. $\frac{1}{4}x + 9 = 13$

12. $\frac{1}{6}x + 8 = 15$

13. $8 - \frac{1}{3}x = 16$

14. $5 - \frac{1}{4}x = 11$

15. $\frac{1}{5}x + 27 = 22$

16. $\frac{1}{7}x + 19 = 21$

17. $\frac{1}{2}x - 29 = -22$

18. $\frac{1}{3}x - 26 = -25$

19. $\frac{3x}{5} + 22 = 28$

20. $\frac{5x}{8} + 13 = 18$

21. $14 - \frac{2x}{3} = 18$

22. $19 - \frac{5x}{2} = 34$

23. $\frac{3x}{5} + 22 = 16$

24. $\frac{4x}{3} + 25 = 33$

25. $\frac{2}{3}x - 3 = 11$

26. $\frac{5}{7}x - 4 = 21$

27. $\frac{4}{9}x + 7 = 31$

28. $\frac{3}{8}x - 14 = 1$

29. $17 - \frac{5}{9}x = 27$

30. $53 - \frac{2}{3}x = 59$

31. $41 - \frac{3}{8}x = -22$

32. $28 - \frac{2}{5}x = 34$

Solutions of Equations

Name _____

Date _____ Period _____

Solve.

- | | | | |
|-------------------------------|----------|------------------------------|-------|
| 1. $3x = 4x - 7$ | <u>7</u> | 2. $5x = 9x - 16$ | _____ |
| 3. $7y = 2y - 15$ | _____ | 4. $4y = y - 21$ | _____ |
| 5. $9x = 2x + 14$ | _____ | 6. $8z = 3z + 30$ | _____ |
| 7. $99 + 6u = -3u$ | _____ | 8. $13p + 2p = 29 - 14p$ | _____ |
| 9. $13d + 25 = 8d$ | _____ | 10. $6m - 14 = 2m + 6$ | _____ |
| 11. $7u - 2u = 3u + 22$ | _____ | 12. $9u - 3u = 2u + 24$ | _____ |
| 13. $17p + p = 40 - 2p$ | _____ | 14. $44 + 7p = -4p$ | _____ |
| 15. $2m - 21 = 9m + 7$ | _____ | 16. $15m - 25 = 9m + 17$ | _____ |
| 17. $18n + 12 = 27n + 3$ | _____ | 18. $41n + 18 = 49n + 42$ | _____ |
| 19. $15b - 8 = 31b + 24$ | _____ | 20. $19b - 10 = 35b + 22$ | _____ |
| 21. $3(z + 5) = 8z$ | _____ | 22. $2(z + 7) = 9z$ | _____ |
| 23. $5(4 - 7u) = -u - 48$ | _____ | 24. $6(5 - 3u) = -4u - 12$ | _____ |
| 25. $7(3 - u) + u = 5 - 2u$ | _____ | 26. $4(3 - u) + u = 22 + 2u$ | _____ |
| 27. $5(1 + c) = 6(2 + c)$ | _____ | 28. $9(3 + c) = 4(3 + c)$ | _____ |
| 29. $5(x + 7) = 6(x - 5)$ | _____ | 30. $9(x - 4) = 3(x + 12)$ | _____ |
| 31. $6(2x - 1) = -5(3x - 15)$ | _____ | 32. $8(3x + 1) = 7(2x + 4)$ | _____ |

Equations Having More Than One Variable

Name _____

Date _____ Period _____

Solve for y .

1. $2x + y = 7$

$y = 7 - 2x$

2. $4x + y = 9$ _____

3. $-x + 4y = 9$ _____

4. $7x + 2y = 5$ _____

5. $3x - y = 12$ _____

6. $6x + 5y = 12$ _____

7. $-2x - 3y = 10$ _____

8. $-x + 6y = 3$ _____

9. $x + \frac{1}{2}y = 6$ _____

10. $x + \frac{1}{4}y = 10$ _____

11. $3x + \frac{2}{3}y = 15$ _____

12. $7x - y = 13$ _____

13. $x + \frac{y}{5} = 10$ _____

14. $7x + \frac{5y}{6} = 6$ _____

15. $2x + \frac{3y}{7} = 9$ _____

16. $4x + \frac{3}{4}y = 11$ _____

Solve for the variable specified. Assume domains include only values that give nonzero denominators.

17. $d = rt$ for t

$t = \frac{d}{r}$

18. $d = rt$ for r _____

19. $A = bh$ for h _____

20. $A = bh$ for b _____

21. $p = 2(L + W)$ for L _____

22. $A = \frac{1}{2}bh$ for h _____

23. $C = 2\pi r$ for r _____

24. $V = \pi r^2 h$ for h _____

25. $A = \frac{h}{2}(a + b)$ for a _____

26. $A = \frac{h}{2}(a + b)$ for b _____

27. $I = prt$ for r _____

28. $E = IR$ for R _____

29. $S = \frac{n}{2}(a + 1)$ for n _____

30. $L = a + d(n - 1)$ for a _____

Products of Binomials

Name _____

Date _____ Period _____

Multiply.

1. $(3x + 7)(3x + 1)$ $9x^2 + 24x + 7$
2. $(x - 3)(5x + 1)$
3. $(5x - 9)(5x - 7)$
4. $(x + 5)(x + 1)$
5. $(x + 9)(3x - 4)$
6. $(4x - 1)(x + 4)$
7. $(x - 8)(7x + 3)$
8. $(6x - 1)(5x - 2)$
9. $(x + 7)(4x - 5)$
10. $(x - 1)(3x + 7)$
11. $(2x + 9)(2x + 3)$
12. $(3x + 5)(x + 2)$
13. $(5x - 7)(x - 9)$
14. $(7x + 1)(x - 1)$
15. $(2x - 1)(5x + 8)$
16. $(5x + 4)(4x - 3)$
17. $(3x + 4)(x - 6)$
18. $(7x - 4)(6x + 5)$
19. $(5x - 1)(2x + 9)$
20. $(4x - 5)(6x - 7)$
21. $(x - 6)(5x - 7)$
22. $(6x + 5)(2x - 5)$
23. $(2x + 5)(x - 2)$
24. $(x + 4)(7x + 4)$
25. $(5x + 8)(7x + 2)$
26. $(3x - 1)(4x + 1)$
27. $(5x - 3)(4x + 9)$
28. $(2x - 7)(6x - 7)$
29. $(7x - 3)(x - 8)$
30. $(3x + 2)(5x - 4)$
31. $(x + 5)(3x - 7)$
32. $(4x + 7)(x + 1)$
33. $(6x + 7)(3x + 5)$
34. $(2x - 3)(7x - 6)$

Powers of Binomials

Name _____

Date _____ Period _____

Multiply.

1. $(5 + x)^2$ $25 + 10x + x^2$

2. $(2y + 1)^2$

3. $(3ab - 4)^2$

4. $(7x - 2)^2$

5. $(c + 1)^2$

6. $(8a - b)^2$

7. $(4x - 3y)^2$

8. $(x + 9y)^2$

9. $(3 + 2d)^2$

10. $(9x + 2y)^2$

11. $(5r - 8)^2$

12. $(p - 2)^2$

13. $(4a + 5b)^2$

14. $(5ab - 2)^2$

15. $(7x - 3y)^2$

16. $(6 - 5xy)^2$

17. $(q - 3)^2$

18. $(9s + 1)^2$

19. $(8 - 5t)^2$

20. $(ab + 8)^2$

21. $(9a + 4b)^2$

22. $(3 - 5m)^2$

23. $(5v + 3)^2$

24. $(5z + 9)^2$

25. $(7c - 4d)^2$

26. $(6x + y)^2$

27. $(x + 1)^3$

28. $(2c - 1)^3$

29. $(2a - 3b)^3$

30. $(r + 4)^3$

31. $(1 - c)^4$

32. $(2d + 1)^4$

33. $(3x + 2y)^4$

34. $(1 - 4r)^4$

Factoring

Name _____

Date _____ Period _____

Factor.

1. $3x^2 - 6x$ $3x(x - 2)$

2. $7b + 14c$

3. $10a - 18b$

4. $6x + 24y$

5. $a^4b^2 - a^2b$

6. $x^3y^2 + x^2y^3$

7. $14x - 18y$

8. $3 - 12a + 15c$

9. $3a + 24b$

10. $13x^3 - 26x$

11. $2x - 8y + 14$

12. $3a + 12b + 15$

13. $7 - 21m + 35n$

14. $24x^4 - 12y$

15. $16a^3 - 12a^2$

16. $13x^3 + 39x^2$

17. $12x^3 + 144x^2$

18. $8r^4 - 24r^3$

19. $a^3 + 2a^2b - ab^4$

20. $15a^3b^2 - 30a^2b^3 + 5ab$

21. $5x^3 + 5x^2 - 10x$

22. $m^3n^2 - m^2n + 5m^4n^3$

23. $a^4 - 3a^3c + 9a^2c^3$

24. $5 + 20r - 25s$

25. $4ab - 2a^2b^2 + 10a^3b^3$

26. $8rst^3 - 4r^2s^2t + 24r^3st^4$

27. $13x^4y^2 + 26x^2y^2 + 13xy$

28. $28a^3b^2 + 7a^2b^2 - 35a^2b^3$

29. $a^3b^2c + 3a^2b^2 + 10abc$

30. $x^3y^2z^5 - 5x^2y^2z^2 + 12x^5y^2z^2$

31. $x^3y^2z - 10xyz + 5x^4y^3$

32. $3a^3b^2c + 6a^6b^3c^2 - 9a^4b^2c^2$

33. $12x^3y + 144x^2y^2 + 60xy^3$

34. $22a^3b - 44a^2b^3 + 66ab^4$

Factoring

Name _____

Date _____ Period _____

Factor.

1. $x^2 + 5x + 6$ **$(x + 2)(x + 3)$**

2. $x^2 + 9x + 20$

3. $x^2 + 7x + 6$

4. $x^2 + 10x + 21$

5. $x^2 + 15x + 56$

6. $x^2 + 3x + 2$

7. $x^2 + 8x + 16$

8. $x^2 + 2x + 1$

9. $x^2 + 7x + 12$

10. $x^2 + 13x + 42$

11. $x^2 + 5x + 4$

12. $x^2 + 14x + 45$

13. $x^2 + 6x + 9$

14. $x^2 + 6x + 5$

15. $x^2 + 10x + 24$

16. $x^2 + 4x + 4$

17. $x^2 + 8x + 7$

18. $x^2 + 12x + 36$

19. $x^2 + 9x + 18$

20. $x^2 + 16x + 63$

21. $x^2 + 10x + 16$

22. $x^2 + 12x + 27$

23. $x^2 - 6x + 8$

24. $x^2 - 11x + 30$

25. $x^2 - 3x + 2$

26. $x^2 - 9x + 8$

27. $x^2 - 13x + 36$

28. $x^2 - 15x + 56$

29. $x^2 - 8x + 16$

30. $x^2 - 8x + 12$

31. $x^2 - 12x + 27$

32. $x^2 - 17x + 72$

33. $x^2 - 11x + 28$

34. $x^2 - 6x + 9$

Factoring

Name _____

Date _____ Period _____

Factor.

1. $2x^2 + 7x + 6$ $(2x + 3)(x + 2)$

2. $2x^2 + 13x + 21$

3. $2x^2 + 3x + 1$

4. $2x^2 + 13x + 20$

5. $2x^2 + 13x + 18$

6. $2x^2 + 21x + 54$

7. $2x^2 + 15x + 7$

8. $2x^2 + 10x + 12$

9. $3x^2 + 10x + 3$

10. $3x^2 + 17x + 20$

11. $3x^2 + 26x + 16$

12. $4x^2 + 11x + 6$

13. $4x^2 + 27x + 18$

14. $4x^2 + 19x + 21$

15. $2x^2 + 15x + 18$

16. $2x^2 + 17x + 36$

17. $3x^2 + 14x + 8$

18. $4x^2 + 9x + 5$

19. $2x^2 + 21x + 49$

20. $3x^2 + 20x + 12$

21. $4x^2 + 19x + 12$

22. $2x^2 + 11x + 15$

23. $3x^2 - 10x + 8$

24. $4x^2 - 35x + 49$

25. $3x^2 - 26x + 35$

26. $2x^2 - 21x + 40$

27. $3x^2 - 13x + 14$

28. $2x^2 - 9x + 7$

29. $4x^2 - 17x + 18$

30. $3x^2 - 22x + 35$

31. $2x^2 - 23x + 63$

32. $3x^2 - 16x + 5$

33. $4x^2 - 27x + 35$

34. $3x^2 - 34x + 63$

State the slope of the line containing the given points.

1. (3, 4) and (-2, 3) *The slope is $\frac{1}{3}$.*
2. (-2, 5) and (-3, 6)
3. (1, 6) and (2, 3)
4. (4, -1) and (5, 3)
5. (-1, 4) and (3, 5)
6. (3, -3) and (3, -2)
7. (7, -2) and (8, -1)
8. (-6, 2) and (-4, -3)
9. (-4, -8) and (-4, 2)
10. (2, -5) and (7, 2)
11. (3, 5) and (-2, 5)
12. (-4, 3) and (-5, 8)
13. (-7, 6) and (3, 9)
14. (-1, 5) and (-3, 7)
15. (12, -15) and (10, -6)
16. (9, 2) and (-5, 2)

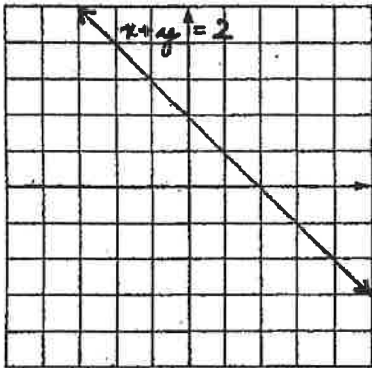
Graph the line with the given slope m containing the given point P .

17. $P = (0, 2); m = 1$
18. $P = (-2, 3); m = 2$
19. $P = (-3, -4); m = \frac{1}{2}$
20. $P = (0, -2); m = \frac{2}{3}$
21. $P = (2, -1); m = 0$
22. $P = (-4, 3); m = -3$
23. $P = (3, 2); m = 3$
24. $P = (-2, -2);$ no slope
25. $P = (4, -1); m = -\frac{3}{4}$
26. $P = (0, -3); m = -\frac{1}{2}$
27. $P = (3, 4);$ no slope
28. $P = (3, 4); m = 0$
29. $P = (0, 0); m = -2$
30. $P = (4, -1); m = \frac{1}{3}$
31. $P = (-3, 2); m = 4$
32. $P = (3, 3); m = -1$

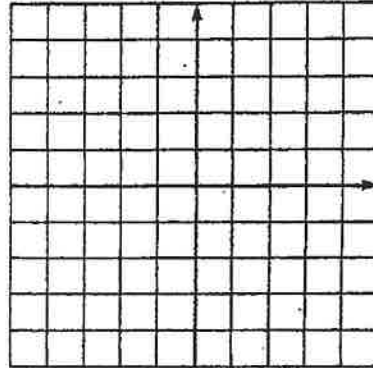
Use the slope and y-intercept to graph each equation. Identify each graph by writing the equation on the line.

- | | |
|--------------------|--------------------|
| 1. $x + y = 2$ | 2. $x + y = 4$ |
| 3. $x - y = 3$ | 4. $x - y = 5$ |
| 5. $3x + y = 4$ | 6. $2x + y = 3$ |
| 7. $3x - 2y = 2$ | 8. $2x - 3y = 6$ |
| 9. $5x + 2y = 10$ | 10. $3x - 4y = 12$ |
| 11. $x - 4y = 8$ | 12. $2x - 5y = 10$ |
| 13. $3x + 2y = 10$ | 14. $4x + 2y = -8$ |
| 15. $2x + 3y = -6$ | 16. $x - 4y = -8$ |
| 17. $5x - 2y = 4$ | 18. $4x + 3y = 6$ |

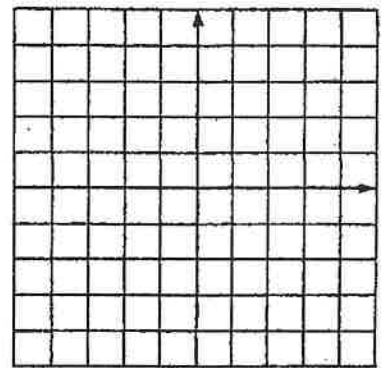
1-3.



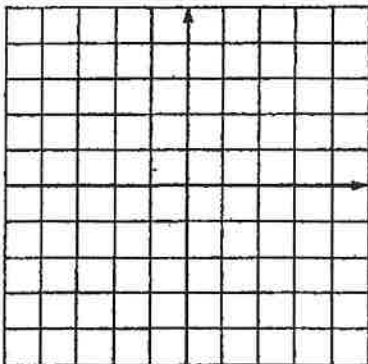
4-6.



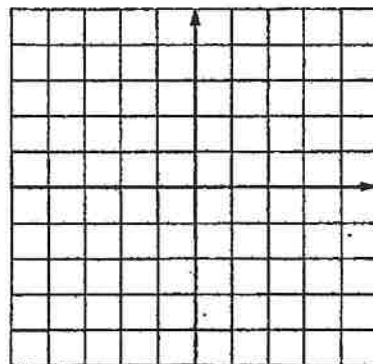
7-9.



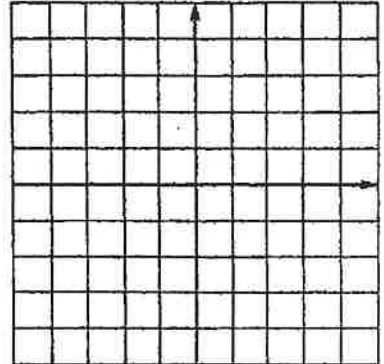
10-12.



13-15.



16-18.



Solve each pair of equations by substitution.

1. $x - y = 7$
 $x + y = 9$ (8, 1)

2. $3x - y = 5$
 $x + 3y = 5$

3. $x - y = -2$
 $4x - 3y = 4$

4. $2x - 3y = 3$
 $x + 4y = 7$

5. $x - y = 6$
 $2x - 3y = 20$

6. $2x - y = 8$
 $3x - y = 6$

7. $x + 3y = 7$
 $4x - 5y = -6$

8. $4x - 3y = 5$
 $3x + 6y = 12$

9. $4x + y = -19$
 $7x - y = 8$

10. $5x + 6y = 10$
 $2x - y = 4$

11. $3x - y = 5$
 $4x - y = 3$

12. $3x + 4y = -20$
 $x - 5y = 6$

13. $6x - 5y = 4$
 $y - 4x = 2$

14. $7x + 3y = 20$
 $x + y = 4$

15. $5x + 2y = -30$
 $3x - y = 4$

16. $3x + 6y = 16$
 $x + 3y = 5$

17. $3x - 7y = 22$
 $5x - y = 2$

18. $2x + 3y = 73$
 $x - 5y = 4$

19. $2x - y = 5$
 $3x + 7y = -1$

20. $3x - 4y = 7$
 $x - 3y = 2$

21. $4x - 12y = 1$
 $4x - 7y = 6$

22. $5x + 3y = 15$
 $2x - 3y = -1$

23. $2x - 5y = 2$
 $6x + 5y = 2$

24. $3x - 2y = 0$
 $5x + 4y = 11$

Solving Equations with Two Variables

Name _____

Date _____ Period _____

Solve each pair of equations by addition or subtraction.

1. $x + y = 10$
 $x - y = 8$ (9, 1)

2. $x + y = 13$
 $x - y = 7$

3. $x + 3y = 7$
 $3x + 3y = 9$

4. $x + 5y = -11$
 $2x + 5y = -12$

5. $3x + y = 5$
 $6x + 2y = 10$

6. $4x + 3y = 0$
 $5x - 3y = 27$

7. $5x + 2y = -8$
 $3x - 2y = -8$

8. $3x - 2y = -4$
 $6x + 5y = 37$

9. $4x - 5y = -9$
 $2x + 3y = 1$

10. $2x - 3y = 4$
 $4x - 6y = 8$

11. $x + 3y = 7$
 $x + 3y = -4$

12. $5x - 3y = -18$
 $x - 6y = -9$

13. $3x - 2y = 12$
 $2x + y = 1$

14. $4x - y = -14$
 $3x + 2y = -16$

15. $4x - 7y = -30$
 $5x - 7y = -34$

16. $3x - y = -2$
 $3x - y = -1$

17. $3x + 2y = 9$
 $3x + 4y = 3$

18. $4x + 3y = 19$
 $7x - 6y = -23$

19. $5x - 3y = -36$
 $2x + 3y = 15$

20. $4x + 5y = 2$
 $2x - 5y = 16$

21. $3x + y = 13$
 $6x + 2y = 26$

22. $2x - 3y = 20$
 $11x + 2y = -1$

23. $4x - 7y = -5$
 $3x - 2y = -7$

24. $3x + 2y = -1$
 $4x - 5y = -32$