 Name_____

Add/Subtracting Fractions and Mixed Numbers

Date_____ Period____

Evaluate each expression.

1) $\frac{5}{4} - \frac{3}{4}$

2) $\frac{3}{2} - \frac{1}{2}$

3) $\frac{2}{5} + \frac{4}{5}$

4) $\frac{1}{3} - \frac{1}{3}$

5) $6 - \frac{1}{6}$

6) $\frac{1}{2} - \frac{1}{2}$

7) $\frac{1}{5} + \frac{1}{5}$

8) $\frac{7}{6} - \frac{5}{6}$

9) $\left(-\frac{4}{5}\right) - \frac{7}{8}$

10) $\frac{1}{3} - \left(-\frac{5}{3}\right)$

11) $\left(-\frac{1}{3}\right) + \frac{3}{8}$

12) $\left(-\frac{10}{7}\right) + \frac{1}{6}$

13) $\frac{9}{5} + \left(-\frac{4}{3}\right)$

14) $2 - \frac{13}{8}$

15) $\frac{9}{5} - \frac{5}{8}$

16) $\left(-\frac{4}{3}\right) - \left(-\frac{3}{2}\right)$

17) $(-1) + \left(-2\frac{2}{5}\right)$

18) $\left(-3\frac{3}{5}\right) - 4\frac{2}{5}$

19) $3\frac{6}{7} + \left(-1\frac{1}{7}\right)$

20) $1\frac{2}{7} + \left(-3\frac{4}{7}\right)$

21) $2\frac{1}{3} + \left(-1\frac{2}{3}\right)$

22) $\left(-1\frac{3}{4}\right) + \left(-3\frac{3}{4}\right)$

23) $\left(-1\frac{7}{8}\right) + \left(-3\frac{1}{2}\right)$

24) $\left(-2\frac{7}{8}\right) + \left(-1\frac{1}{2}\right)$

25) $\left(-2\frac{5}{6}\right) - \left(-1\frac{1}{4}\right)$

26) $\left(-3\frac{5}{8}\right) - 4\frac{2}{5}$

27) $1\frac{2}{5} - \left(-3\frac{3}{4}\right)$

28) $2\frac{4}{5} - \frac{5}{8}$

Add/Subtracting Fractions and Mixed Numbers

Date_____ Period____

Evaluate each expression.

1) $\frac{5}{4} - \frac{3}{4}$

$\frac{1}{2}$

2) $\frac{3}{2} - \frac{1}{2}$

1

3) $\frac{2}{5} + \frac{4}{5}$

$\frac{6}{5}$

4) $\frac{1}{3} - \frac{1}{3}$

0

5) $6 - \frac{1}{6}$

$\frac{35}{6}$

6) $\frac{1}{2} - \frac{1}{2}$

0

7) $\frac{1}{5} + \frac{1}{5}$

$\frac{2}{5}$

8) $\frac{7}{6} - \frac{5}{6}$

$\frac{1}{3}$

9) $\left(-\frac{4}{5}\right) - \frac{7}{8}$

$-\frac{67}{40}$

10) $\frac{1}{3} - \left(-\frac{5}{3}\right)$

2

11) $\left(-\frac{1}{3}\right) + \frac{3}{8}$

$\frac{1}{24}$

12) $\left(-\frac{10}{7}\right) + \frac{1}{6}$

$-\frac{53}{42}$

13) $\frac{9}{5} + \left(-\frac{4}{3}\right)$

$\frac{7}{15}$

14) $2 - \frac{13}{8}$

$\frac{3}{8}$

15) $\frac{9}{5} - \frac{5}{8}$

$\frac{47}{40}$

16) $\left(-\frac{4}{3}\right) - \left(-\frac{3}{2}\right)$

$\frac{1}{6}$

17) $(-1) + \left(-2\frac{2}{5}\right)$

$-3\frac{2}{5}$

18) $\left(-3\frac{3}{5}\right) - 4\frac{2}{5}$

-8

19) $3\frac{6}{7} + \left(-1\frac{1}{7}\right)$

$2\frac{5}{7}$

20) $1\frac{2}{7} + \left(-3\frac{4}{7}\right)$

$-2\frac{2}{7}$

21) $2\frac{1}{3} + \left(-1\frac{2}{3}\right)$

$\frac{2}{3}$

22) $\left(-1\frac{3}{4}\right) + \left(-3\frac{3}{4}\right)$

$-5\frac{1}{2}$

23) $\left(-1\frac{7}{8}\right) + \left(-3\frac{1}{2}\right)$

$-5\frac{3}{8}$

24) $\left(-2\frac{7}{8}\right) + \left(-1\frac{1}{2}\right)$

$-4\frac{3}{8}$

25) $\left(-2\frac{5}{6}\right) - \left(-1\frac{1}{4}\right)$

$-1\frac{7}{12}$

26) $\left(-3\frac{5}{8}\right) - 4\frac{2}{5}$

$-8\frac{1}{40}$

27) $1\frac{2}{5} - \left(-3\frac{3}{4}\right)$

$5\frac{3}{20}$

28) $2\frac{4}{5} - \frac{5}{8}$

$2\frac{7}{40}$

Name_____

Evaluating Expressions

Date_____ Period____

Evaluate each using the values given.

1) $y \div 2 + x$; use $x = 1$, and $y = 2$

2) $a - 5 - b$; use $a = 10$, and $b = 4$

3) $p^2 + m$; use $m = 1$, and $p = 5$

4) $y + 9 - x$; use $x = 1$, and $y = 3$

5) $m + p \div 5$; use $m = 1$, and $p = 5$

6) $y^2 - x$; use $x = 7$, and $y = 7$

7) $z(x + y)$; use $x = 6$, $y = 8$, and $z = 6$

8) $x + y + y$; use $x = 9$, and $y = 10$

9) $p^3 + 10 + m$; use $m = 9$, and $p = 3$

10) $6q + m - m$; use $m = 8$, and $q = 3$

11) $p^2 m \div 4$; use $m = 4$, and $p = 7$

12) $y - (z + z^2)$; use $y = 10$, and $z = 2$

13) $z - (y \div 3 - 1)$; use $y = 3$, and $z = 7$

14) $(y + x) \div 2 + x$; use $x = 1$, and $y = 1$

15) $p-(9-(m+q))$; use $m=4,\ p=5$, and $q=3$

16) $(a^2-b)\div 6$; use $a=5$, and $b=1$

17) $(6+h^2-j)\div 2$; use $h=6$, and $j=4$

18) $y-(4-x-\ y\div 2)$; use $x=3$, and $y=2$

19) $x^3\div 3-y$; use $x=3$, and $y=1$

20) $(p+q)^2-(5-5)$; use $p=1$, and $q=1$

21) $12k-h^2$; use $h=2$, and $k=3$

22) $y\div 5\ +1+x\div 6$; use $x=6$, and $y=5$

23) $6\div 6\ +z+x-y$; use $x=2,\ y=5$, and $z=6$

24) $y-z+xz\div 6$; use $x=3,\ y=4$, and $z=4$

25) $\frac{y}{2}+x+4+z+y$; use $x=7,\ y=2$, and $z=4$

26) $c\times\frac{bc}{4}-(7-a)$; use $a=4$, $b=8$, and $c=5$

Kuta Software - Infinite Algebra 1 Name_____

Evaluating Expressions

Date_____ Period____

Evaluate each using the values given.

1) $y \div 2 + x$; use $x = 1$, and $y = 2$

2

2) $a - 5 - b$; use $a = 10$, and $b = 4$

1

3) $p^2 + m$; use $m = 1$, and $p = 5$

26

4) $y + 9 - x$; use $x = 1$, and $y = 3$

11

5) $m + p \div 5$; use $m = 1$, and $p = 5$

2

6) $y^2 - x$; use $x = 7$, and $y = 7$

42

7) $z(x + y)$; use $x = 6$, $y = 8$, and $z = 6$

84

8) $x + y + y$; use $x = 9$, and $y = 10$

29

9) $p^3 + 10 + m$; use $m = 9$, and $p = 3$

46

10) $6q + m - m$; use $m = 8$, and $q = 3$

18

11) $p^2 m \div 4$; use $m = 4$, and $p = 7$

49

12) $y - (z + z^2)$; use $y = 10$, and $z = 2$

4

13) $z - (y \div 3 - 1)$; use $y = 3$, and $z = 7$

7

14) $(y + x) \div 2 + x$; use $x = 1$, and $y = 1$

2

15) $p-(9-(m+q))$; use $m=4,\ p=5$, and $q=3$

3

16) $(a^2-b)\div 6$; use $a=5$, and $b=1$

4

17) $(6+h^2-j)\div 2$; use $h=6$, and $j=4$

19

18) $y-(4-x-\ y\div 2)$; use $x=3$, and $y=2$

2

19) $x^3\div 3-y$; use $x=3$, and $y=1$

8

20) $(p+q)^2-(5-5)$; use $p=1$, and $q=1$

4

21) $12k-h^2$; use $h=2$, and $k=3$

32

22) $y\div 5\ +1+x\div 6$; use $x=6$, and $y=5$

3

23) $6\div 6\ +z+x-y$; use $x=2,\ y=5$, and $z=6$

4

24) $y-z+xz\div 6$; use $x=3,\ y=4$, and $z=4$

2

25) $\frac{y}{2}+x+4+z+y$; use $x=7,\ y=2$, and $z=4$

18

26) $c\times\frac{bc}{4}-(7-a)$; use $a=4$, $b=8$, and $c=5$

47

Name_____

Factoring Trinomials (a = 1)

Date_____ Period____

Factor each completely.

1) $b^2 + 8b + 7$

2) $n^2 - 11n + 10$

3) $m^2 + m - 90$

4) $n^2 + 4n - 12$

5) $n^2 - 10n + 9$

6) $b^2 + 16b + 64$

7) $m^2 + 2m - 24$

8) $x^2 - 4x + 24$

9) $k^2 - 13k + 40$

10) $a^2 + 11a + 18$

11) $n^2 - n - 56$

12) $n^2 - 5n + 6$

13) $b^2 - 6b + 8$

14) $n^2 + 6n + 8$

15) $2n^2 + 6n - 108$

16) $5n^2 + 10n + 20$

17) $2k^2 + 22k + 60$

18) $a^2 - a - 90$

19) $p^2 + 11p + 10$

20) $5v^2 - 30v + 40$

21) $2p^2 + 2p - 4$

22) $4v^2 - 4v - 8$

23) $x^2 - 15x + 50$

24) $v^2 - 7v + 10$

25) $p^2 + 3p - 18$

26) $6v^2 + 66v + 60$

Kuta Software - Infinite Algebra 1 Name_____

Factoring Trinomials (a = 1)

Date_____ Period____

Factor each completely.

1) $b^2 + 8b + 7$

$(b + 7)(b + 1)$

2) $n^2 - 11n + 10$

$(n - 10)(n - 1)$

3) $m^2 + m - 90$

$(m - 9)(m + 10)$

4) $n^2 + 4n - 12$

$(n - 2)(n + 6)$

5) $n^2 - 10n + 9$

$(n - 1)(n - 9)$

6) $b^2 + 16b + 64$

$(b + 8)^2$

7) $m^2 + 2m - 24$

$(m + 6)(m - 4)$

8) $x^2 - 4x + 24$

Not factorable

9) $k^2 - 13k + 40$

$(k - 5)(k - 8)$

10) $a^2 + 11a + 18$

$(a + 2)(a + 9)$

11) $n^2 - n - 56$

$(n + 7)(n - 8)$

12) $n^2 - 5n + 6$

$(n - 2)(n - 3)$

13) $b^2 - 6b + 8$

$(b - 4)(b - 2)$

14) $n^2 + 6n + 8$

$(n + 2)(n + 4)$

15) $2n^2 + 6n - 108$

$2(n + 9)(n - 6)$

16) $5n^2 + 10n + 20$

$5(n^2 + 2n + 4)$

17) $2k^2 + 22k + 60$

$2(k + 5)(k + 6)$

18) $a^2 - a - 90$

$(a - 10)(a + 9)$

19) $p^2 + 11p + 10$

$(p + 10)(p + 1)$

20) $5v^2 - 30v + 40$

$5(v - 2)(v - 4)$

21) $2p^2 + 2p - 4$

$2(p - 1)(p + 2)$

22) $4v^2 - 4v - 8$

$4(v + 1)(v - 2)$

23) $x^2 - 15x + 50$

$(x - 10)(x - 5)$

24) $v^2 - 7v + 10$

$(v - 5)(v - 2)$

25) $p^2 + 3p - 18$

$(p - 3)(p + 6)$

26) $6v^2 + 66v + 60$

$6(v + 10)(v + 1)$

Kuta Software - Infinite Pre-Algebra Name_____

Greatest Common Factor

Date_____ Period____

Find the GCF of each.

1) 39, 6

2) 24, 28

3) 40, 10

4) $39v$, $30uv$

5) $35n^2m$, $21m^2n$

6) $30y^3$, $20y^2$

7) 54, 45

8) 25, 55

9) 68, 34

10) 54, 27

11) 55, 75

12) $66yx$, $30x^2y$

13) $60y$, $56x^2$

14) $36xy^3$, $24y^2$

15) $18y^2$, $54y^2$

16) $80x^3$, $30yx^2$

17) $105x$, $30yx$, $75x$

18) $140n$, $140m^2$, $80m^2$

Kuta Software - Infinite Pre-Algebra Name_____

Greatest Common Factor

Date_____ Period____

Find the GCF of each.

1) 39, 6

3

2) 24, 28

4

3) 40, 10

10

4) $39v$, $30uv$

$3v$

5) $35n^2m$, $21m^2n$

$7nm$

6) $30y^3$, $20y^2$

$10y^2$

7) 54, 45

9

8) 25, 55

5

9) 68, 34

34

10) 54, 27

27

11) 55, 75

5

12) $66yx$, $30x^2y$

$6yx$

13) $60y$, $56x^2$

4

14) $36xy^3$, $24y^2$

$12y^2$

15) $18y^2$, $54y^2$

$18y^2$

16) $80x^3$, $30yx^2$

$10x^2$

17) $105x$, $30yx$, $75x$

$15x$

18) $140n$, $140m^2$, $80m^2$

20

Name_____

Least Common Multiple

Date_____ Period____

Find the LCM of each.

1) 10, 3

2) 14, 6

3) 15, 6

4) 15, 20

5) 27, 18

6) 4, 30

7) 24, 32

8) 20, 30

9) 24, 36

10) 35, 25

11) $18xy^2$, $15y^3$

12) $20x^3$, $16x^4$

13) $18, 6v$

14) $3x^2, 10$

15) $20y, 14y^2$

16) $25x^2, 25y$

17) $32u^2, 14v^2$

18) $18m^2, 24nm$

19) $16x^2y, 32x$

20) $30ab^3, 20ab^3$

21) 30, 25, 10

22) 28, 14, 21

23) 10, 4, 18

24) $10ba, 20ba, 28ba$

25) $8y^2, 16xy, 16y$

26) $28b^2, 20ab^3, 16b^4$

 Name_____

Least Common Multiple

Date_____ Period____

Find the LCM of each.

1) 10, 3

30

2) 14, 6

42

3) 15, 6

30

4) 15, 20

60

5) 27, 18

54

6) 4, 30

60

7) 24, 32

96

8) 20, 30

60

9) 24, 36

72

10) 35, 25

175

11) $18xy^2$, $15y^3$

$90xy^3$

12) $20x^3$, $16x^4$

$80x^4$

13) $18, 6v$

$18v$

14) $3x^2, 10$

$30x^2$

15) $20y, 14y^2$

$140y^2$

16) $25x^2, 25y$

$25x^2y$

17) $32u^2, 14v^2$

$224u^2v^2$

18) $18m^2, 24nm$

$72m^2n$

19) $16x^2y, 32x$

$32x^2y$

20) $30ab^3, 20ab^3$

$60ab^3$

21) $30, 25, 10$

150

22) $28, 14, 21$

84

23) $10, 4, 18$

180

24) $10ba, 20ba, 28ba$

$140ba$

25) $8y^2, 16xy, 16y$

$16y^2x$

26) $28b^2, 20ab^3, 16b^4$

$560b^4a$

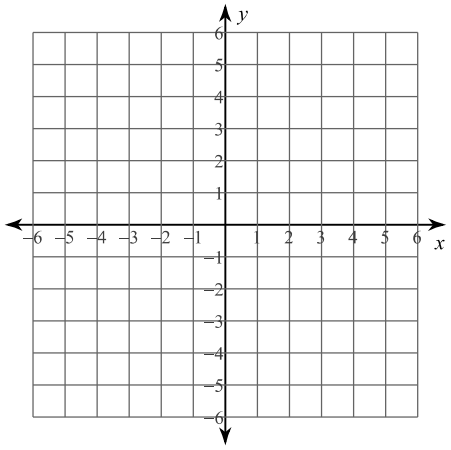
Name_____

Graphing Lines

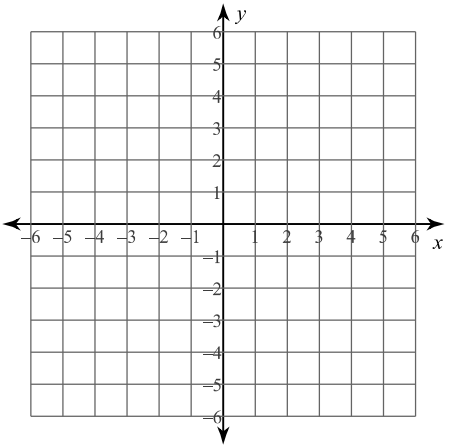
Date_____ Period____

Sketch the graph of each line.

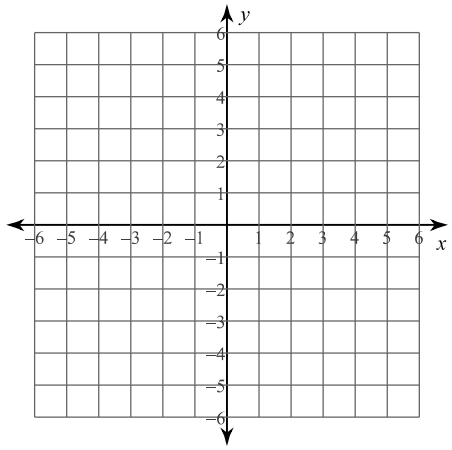
1) $y = \frac{7}{2}x - 2$



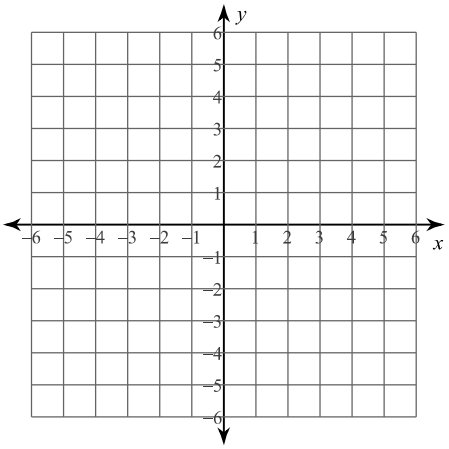
2) $y = -6x + 3$



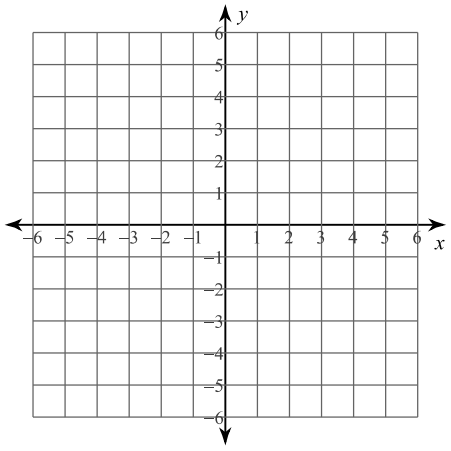
3) $y = -5$



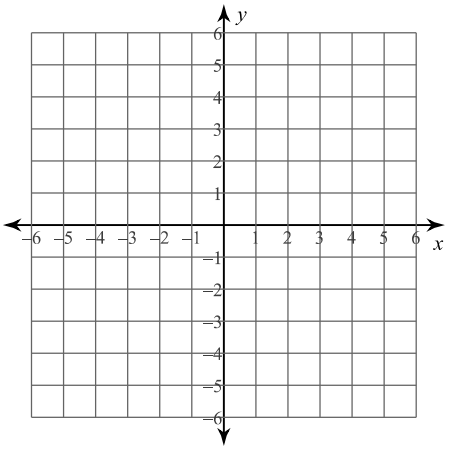
4) $y = \frac{6}{5}x + 1$



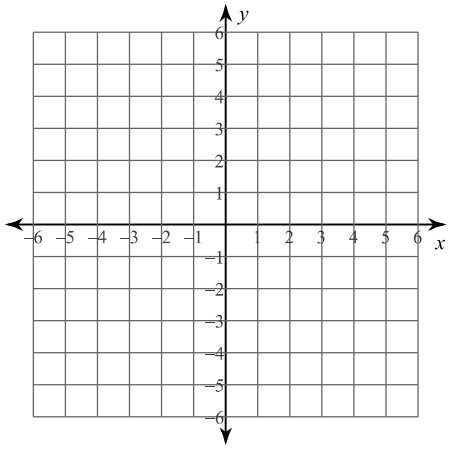
5) $y = \frac{1}{4}x + 2$



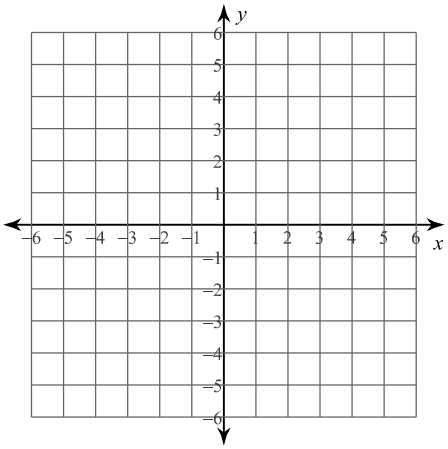
6) $x = 5$



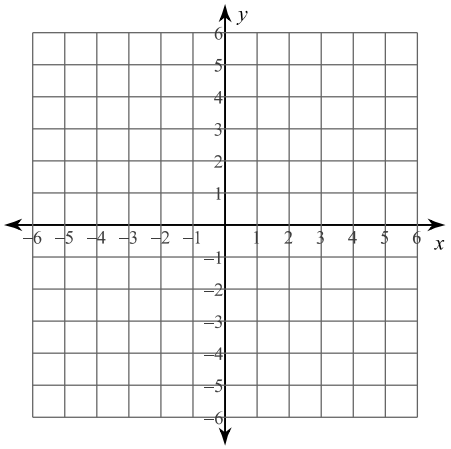
7) $y = \frac{5}{3}x$



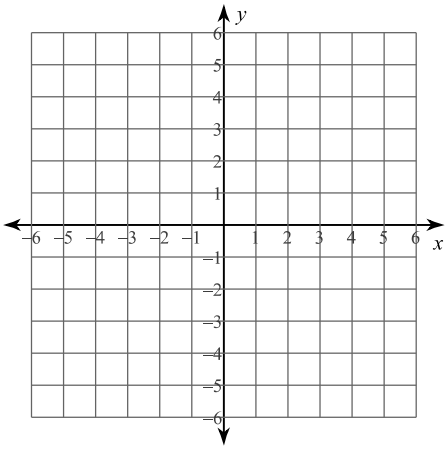
8) $x = 0$



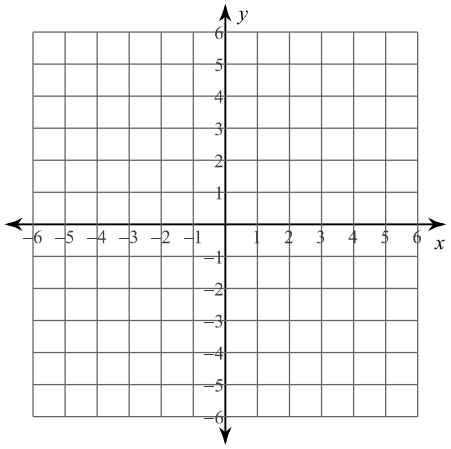
9) $y = -\frac{1}{3}x + 3$



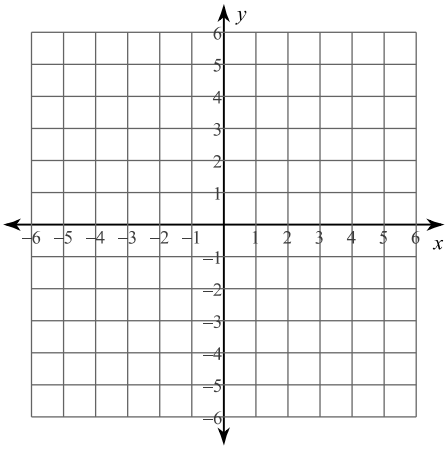
10) $y = \frac{1}{5}x - 4$



11) $y = \frac{1}{2}x - 2$



12) $y = 2x + 5$



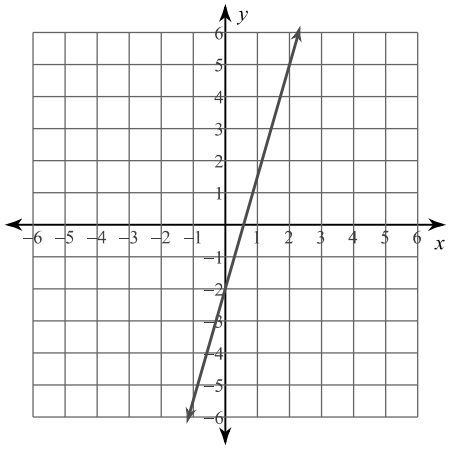
Name_____

Graphing Lines

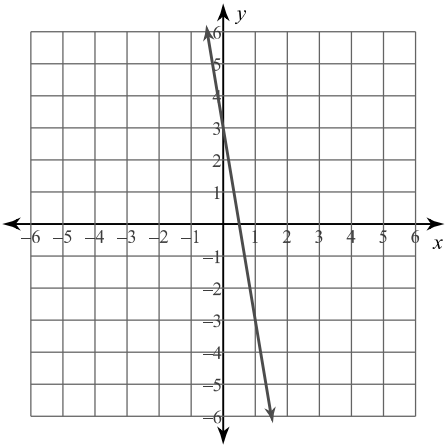
Date_____ Period____

Sketch the graph of each line.

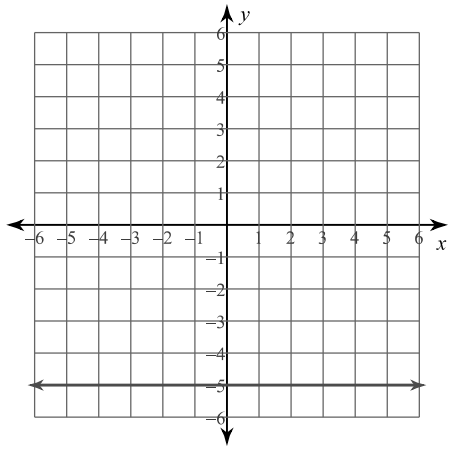
1) $y = \frac{7}{2}x - 2$



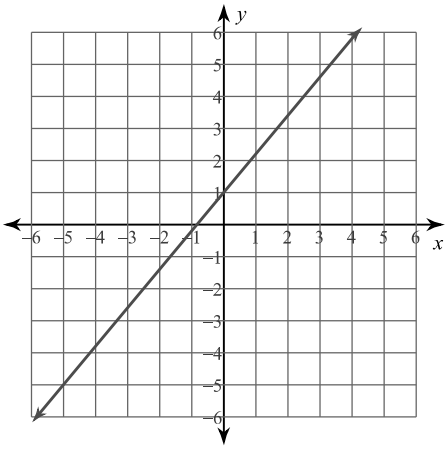
2) $y = -6x + 3$



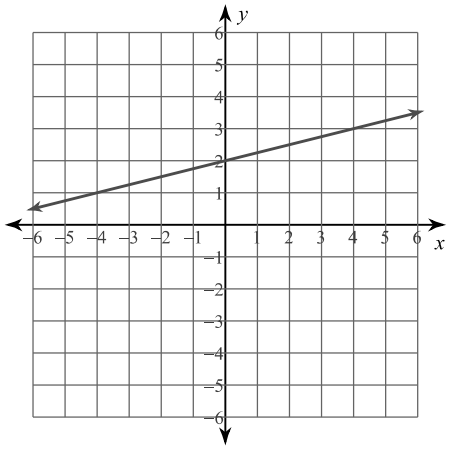
3) $y = -5$



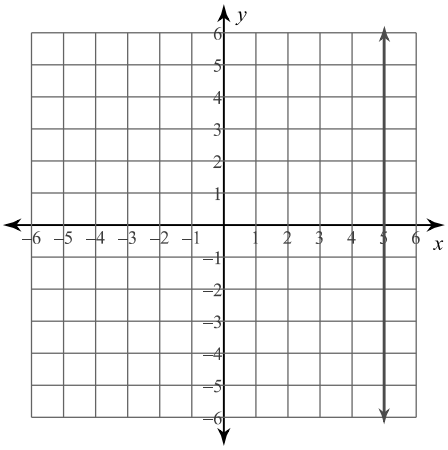
4) $y = \frac{6}{5}x + 1$



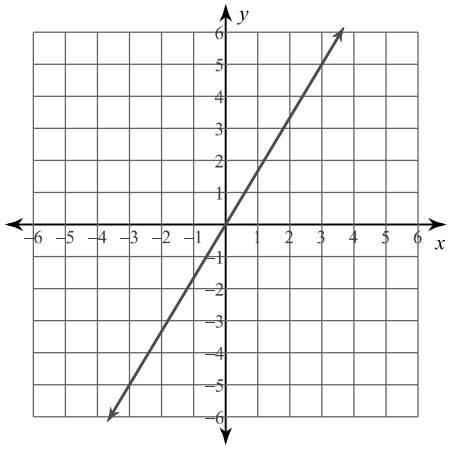
5) $y = \frac{1}{4}x + 2$



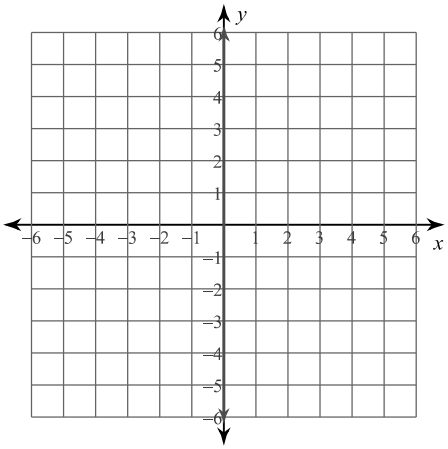
6) $x = 5$



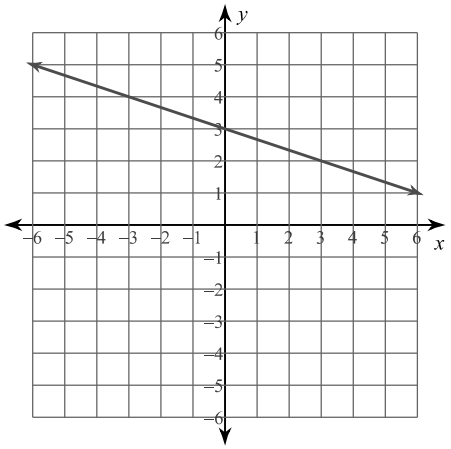
7) $y = \frac{5}{3}x$



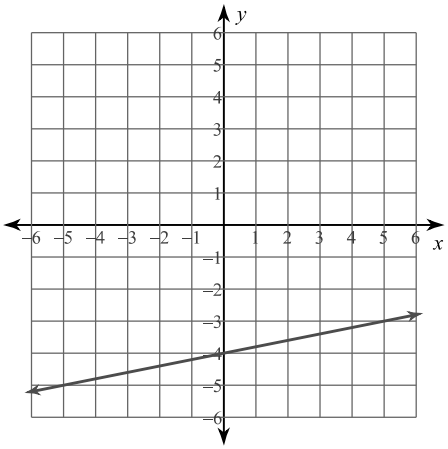
8) $x = 0$



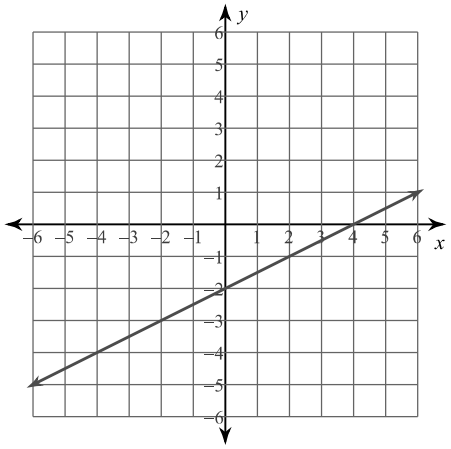
9) $y = -\frac{1}{3}x + 3$



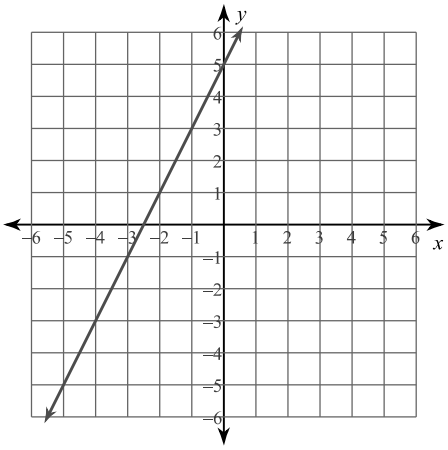
10) $y = \frac{1}{5}x - 4$



11) $y = \frac{1}{2}x - 2$



12) $y = 2x + 5$



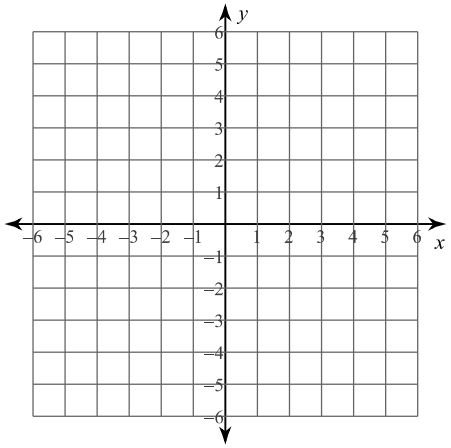
Kuta Software - Infinite Algebra 1 Name_____

Graphing Lines

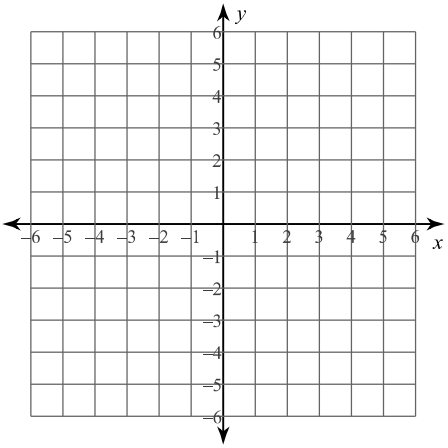
Date_____ Period____

Sketch the graph of each line.

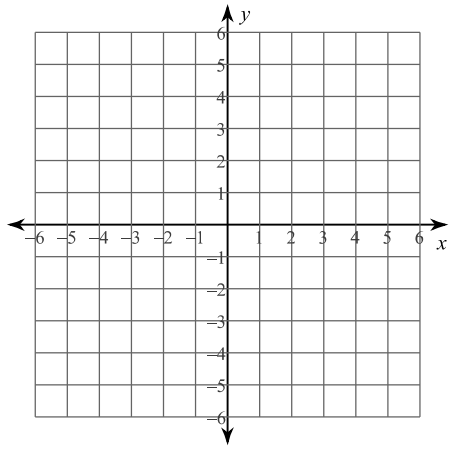
1) $7x + y = 5$



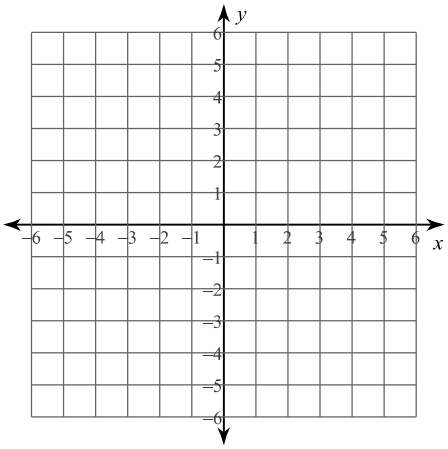
2) $3x + 5y = -5$



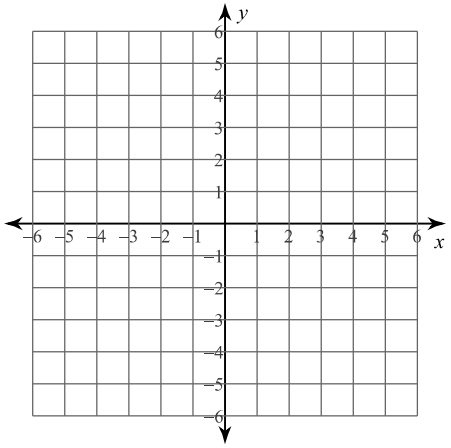
3) $y = 4$



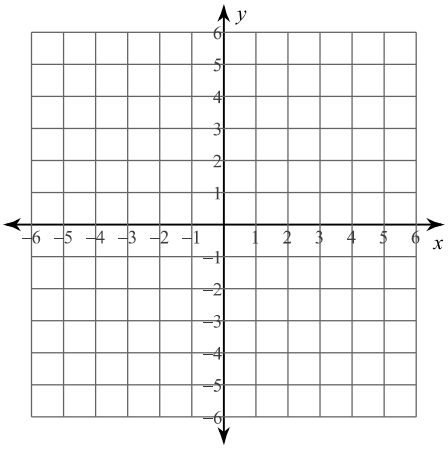
4) $6x + 5y = 20$



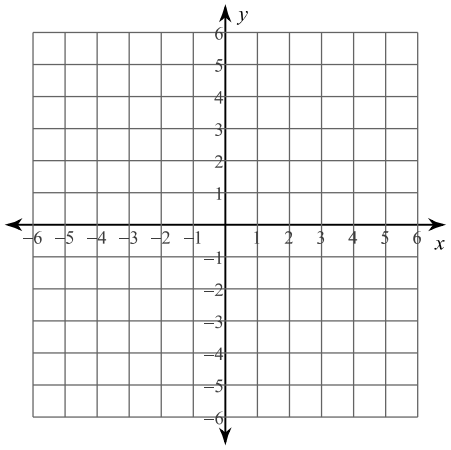
5) $x = -3$



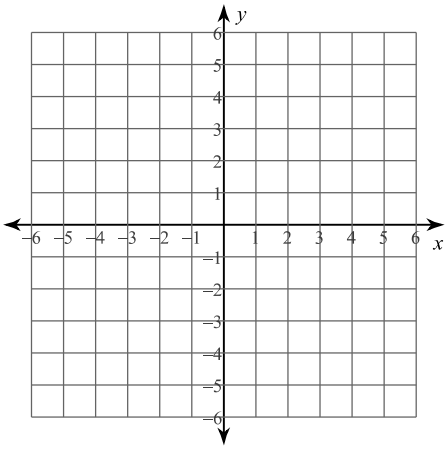
6) $2x + y = 4$



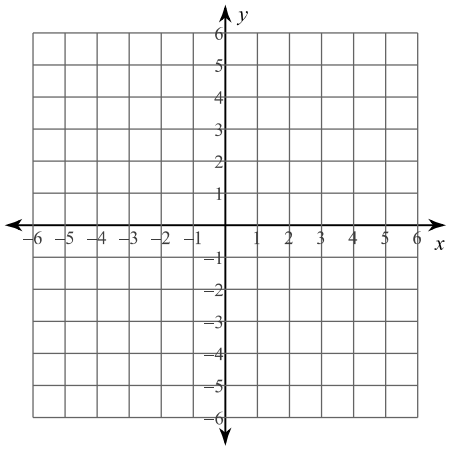
7) $x + y = 3$



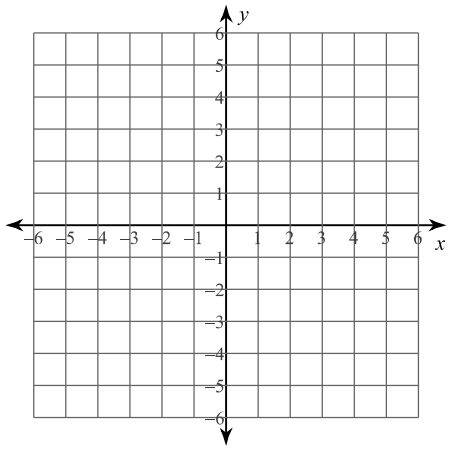
8) $10x - 3y = 15$



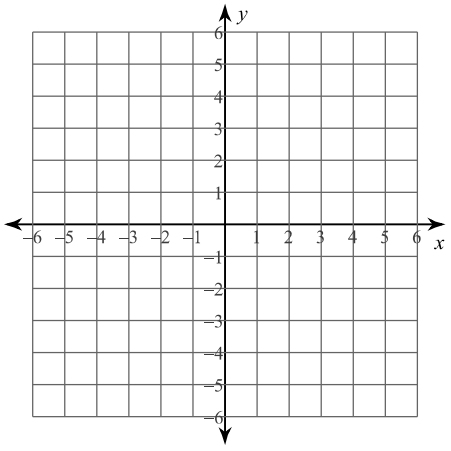
9) $x - y = 3$



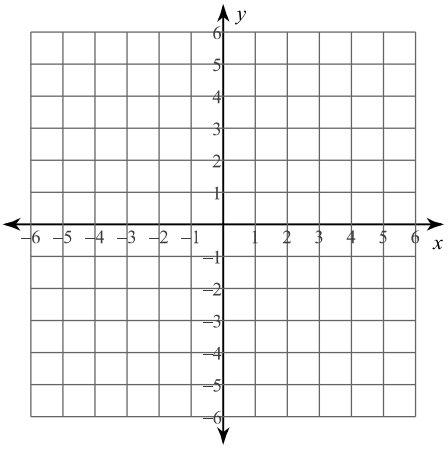
10) $y = 0$



11) $x + y = -3$



12) $x + y = -1$



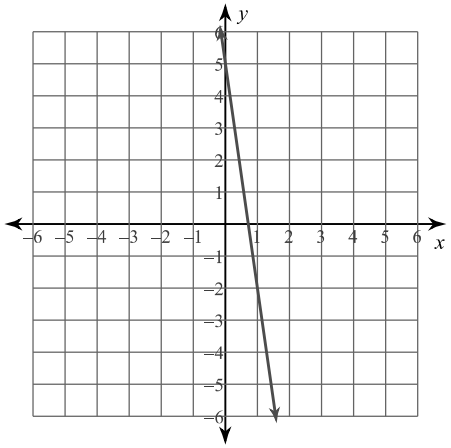
Kuta Software - Infinite Algebra 1 Name_____

Graphing Lines

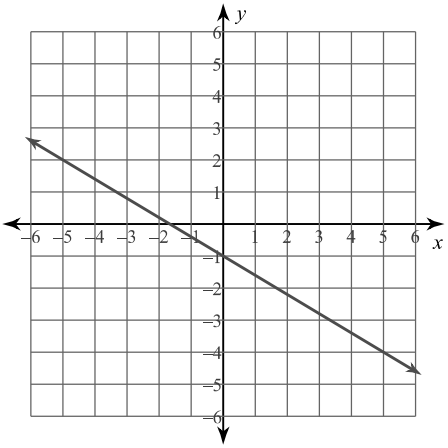
Date_____ Period____

Sketch the graph of each line.

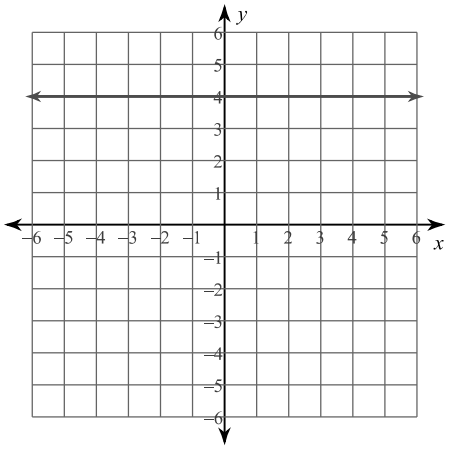
1) $7x + y = 5$



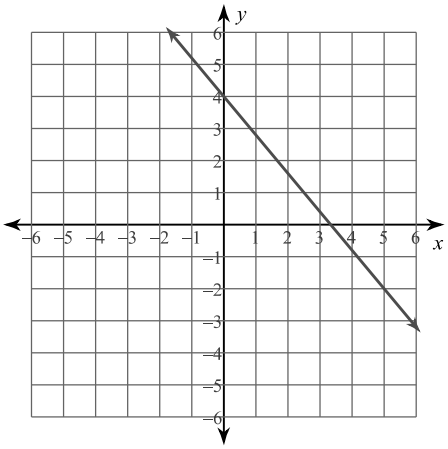
2) $3x + 5y = -5$



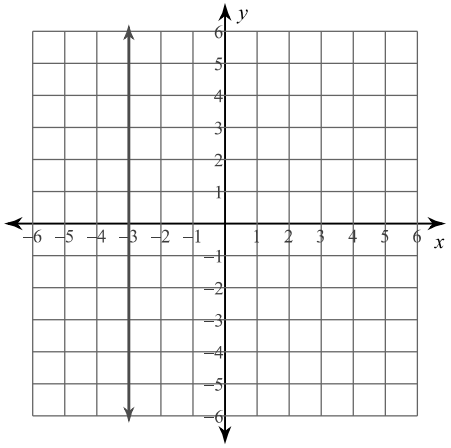
3) $y = 4$



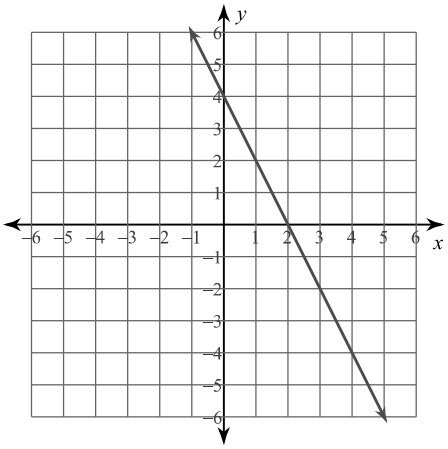
4) $6x + 5y = 20$



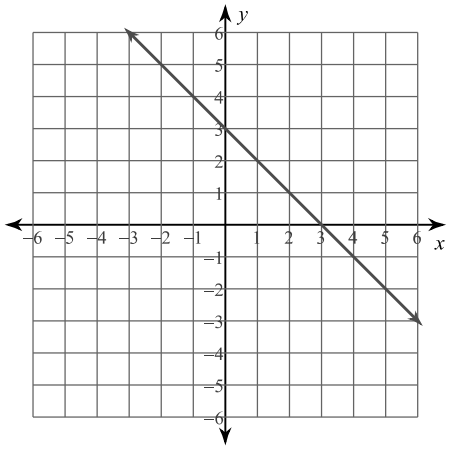
5) $x = -3$



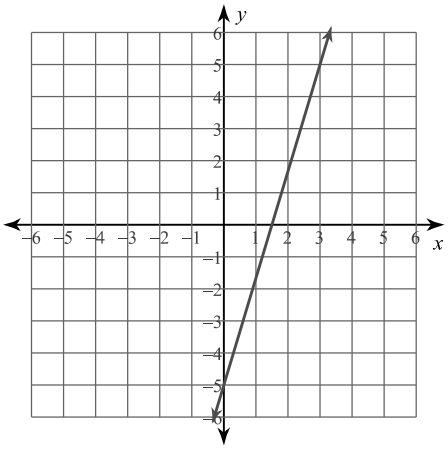
6) $2x + y = 4$



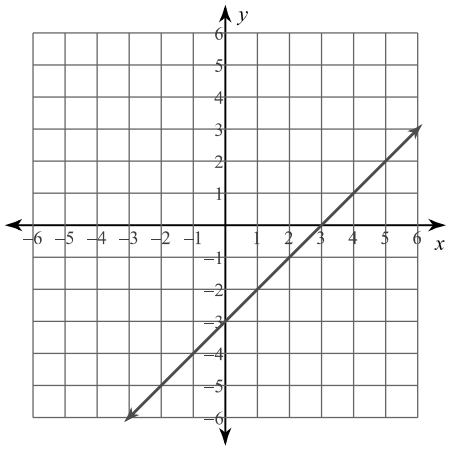
7) $x + y = 3$



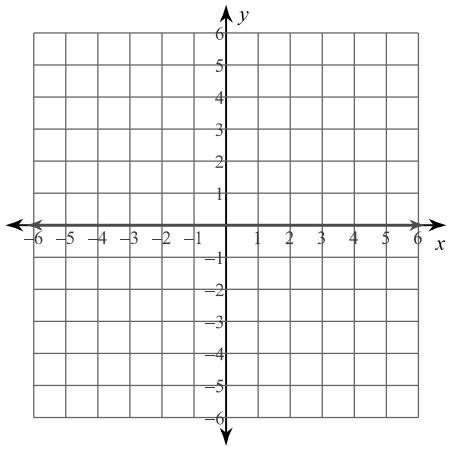
8) $10x - 3y = 15$



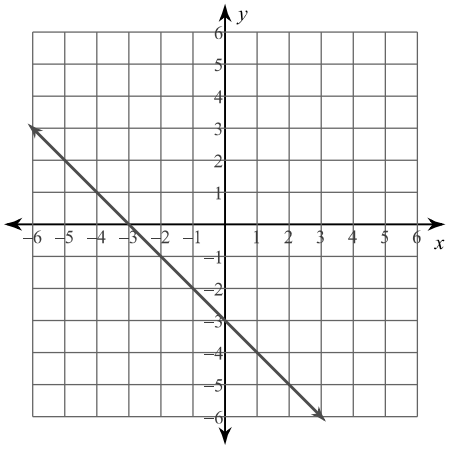
9) $x - y = 3$



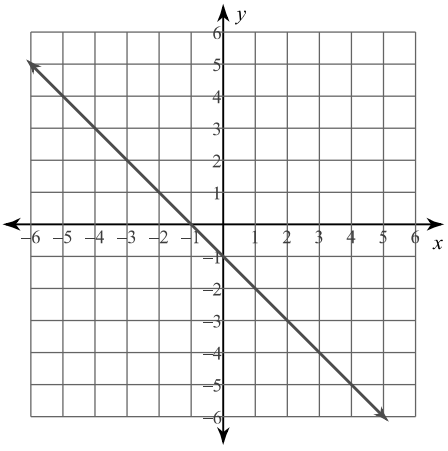
10) $y = 0$



11) $x + y = -3$



12) $x + y = -1$



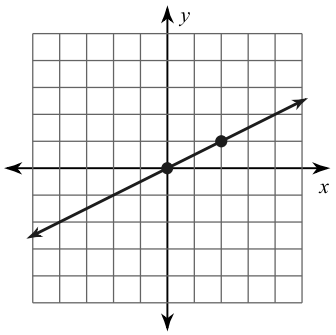
Name_____

Finding Slope From a Graph

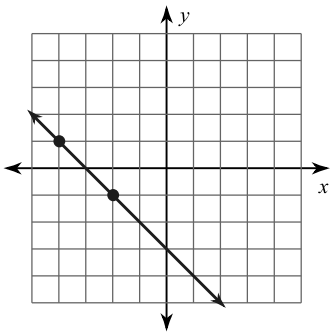
Date_____ Period____

Find the slope of each line.

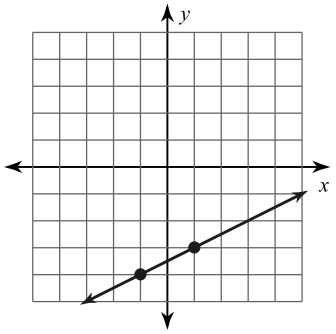
1)



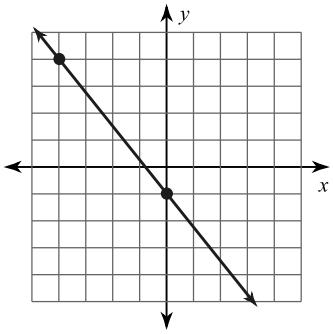
2)



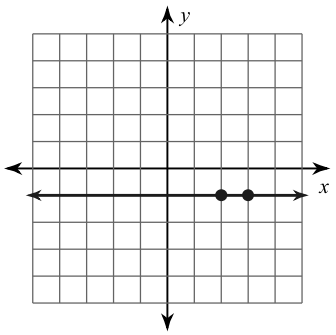
3)



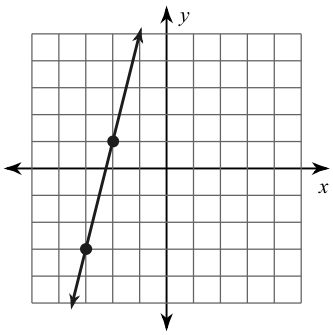
4)



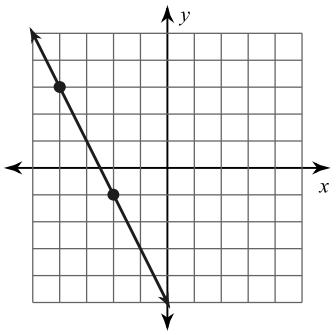
5)



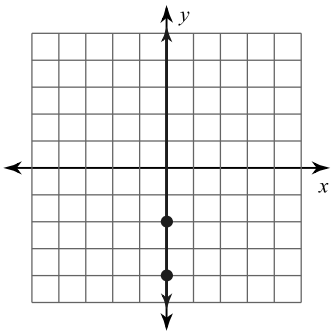
6)



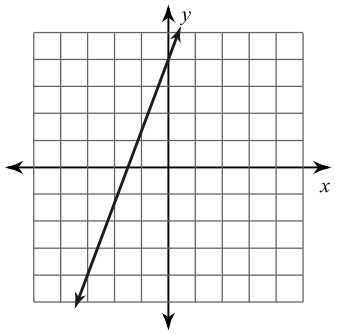
7)



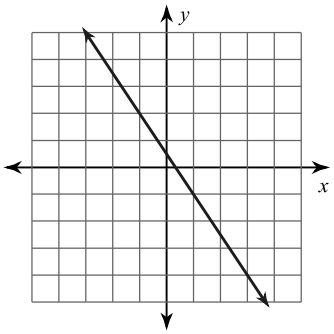
8)



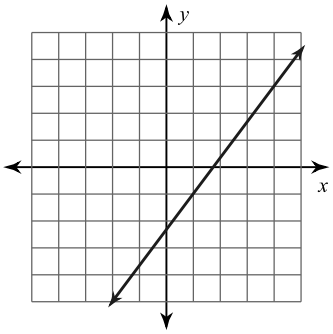
9)



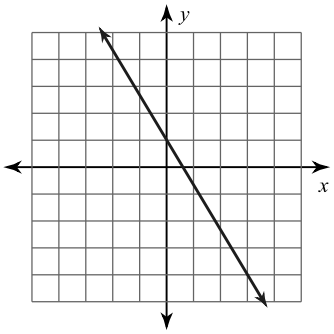
10)



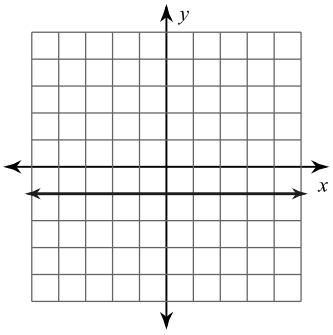
11)



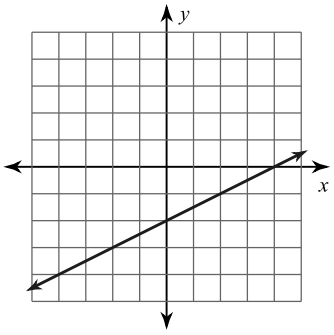
12)



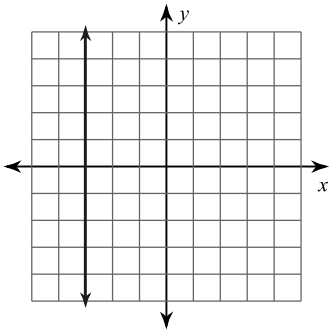
13)



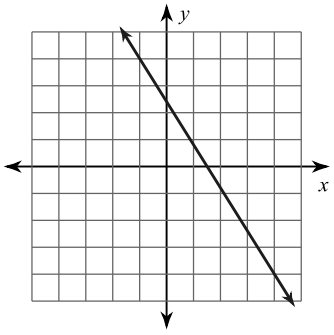
14)



15)



16)



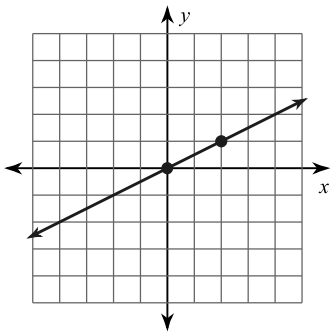
Kuta Software - Infinite Algebra 1 Name_____

Finding Slope From a Graph

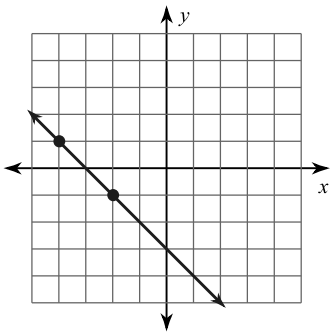
Date_____ Period____

Find the slope of each line.

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

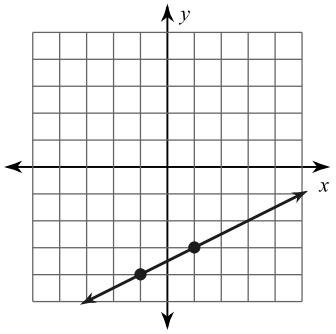


2)

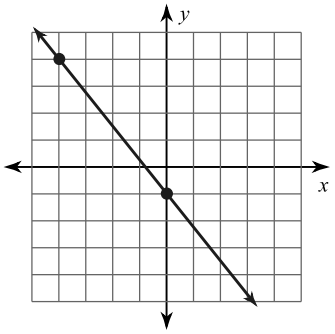


-1

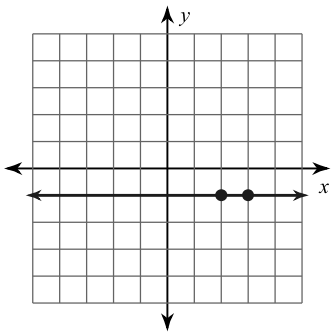
3) $\frac{1}{2}$



4) $-\frac{5}{4}$

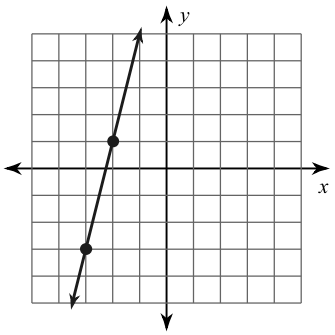


5)



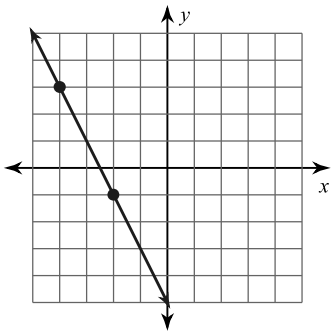
0

6)



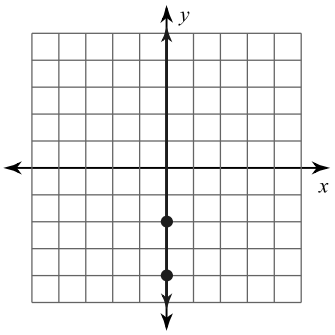
4

7)



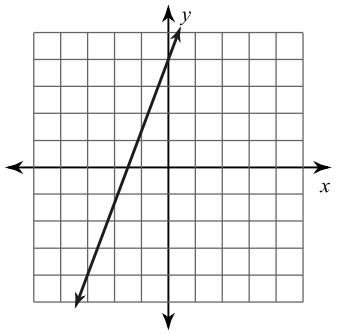
-2

8)



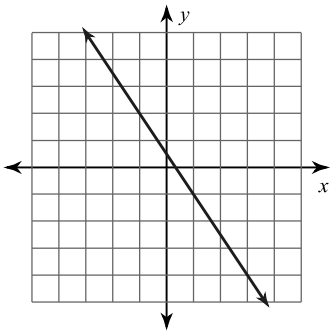
Undefined

9)



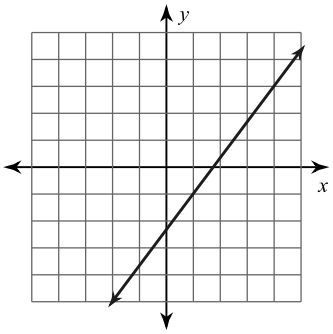
$\frac{8}{3}$

10)



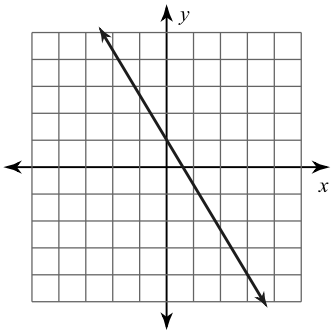
$-\frac{3}{2}$

11)



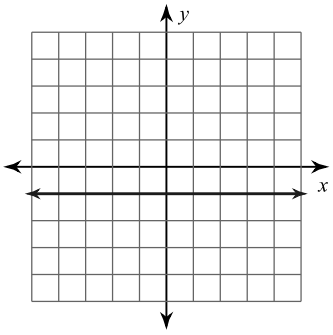
$\frac{4}{3}$

12)



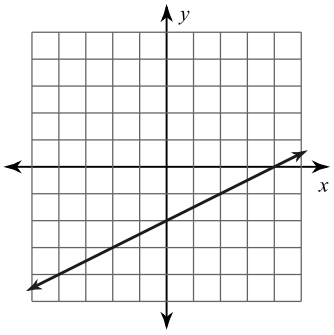
$-\frac{5}{3}$

13)



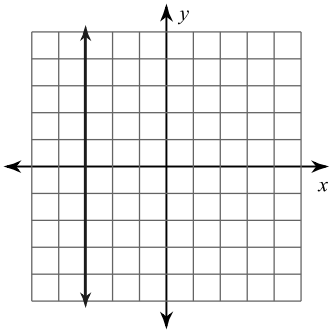
0

14)



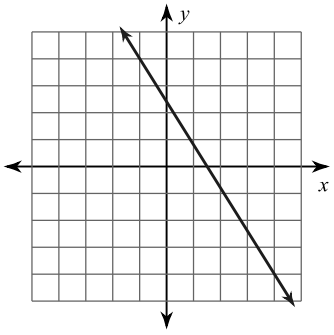
$\frac{1}{2}$

15)



Undefined

16)



$-\frac{8}{5}$

Name_____

Multiplying Polynomials

Date_____ Period____

Find each product.

1) $6v(2v + 3)$

2) $7(-5v - 8)$

3) $2x(-2x - 3)$

4) $-4(v + 1)$

5) $(2n + 2)(6n + 1)$

6) $(4n + 1)(2n + 6)$

7) $(x - 3)(6x - 2)$

8) $(8p - 2)(6p + 2)$

9) $(6p + 8)(5p - 8)$

10) $(3m - 1)(8m + 7)$

11) $(2a - 1)(8a - 5)$

12) $(5n + 6)(5n - 5)$

13) $(4p-1)^2$

14) $(7x-6)(5x+6)$

15) $(6n+3)(6n-4)$

16) $(8n+1)(6n-3)$

17) $(6k+5)(5k+5)$

18) $(3x-4)(4x+3)$

19) $(4a+2)(6a^2-a+2)$

20) $(7k-3)(k^2-2k+7)$

21) $(7r^2-6r-6)(2r-4)$

22) $(n^2+6n-4)(2n-4)$

23) $(6n^2-6n-5)(7n^2+6n-5)$

24) $(m^2 - 7m - 6)(7m^2 - 3m - 7)$

Kuta Software - Infinite Algebra 1 Name_____

Multiplying Polynomials

Date_____ Period____

Find each product.

1) $6v(2v + 3)$

$12v^2 + 18v$

2) $7(-5v - 8)$

$-35v - 56$

3) $2x(-2x - 3)$

$-4x^2 - 6x$

4) $-4(v + 1)$

$-4v - 4$

5) $(2n + 2)(6n + 1)$

$12n^2 + 14n + 2$

6) $(4n + 1)(2n + 6)$

$8n^2 + 26n + 6$

7) $(x - 3)(6x - 2)$

$6x^2 - 20x + 6$

8) $(8p - 2)(6p + 2)$

$48p^2 + 4p - 4$

9) $(6p + 8)(5p - 8)$

$30p^2 - 8p - 64$

10) $(3m - 1)(8m + 7)$

$24m^2 + 13m - 7$

11) $(2a - 1)(8a - 5)$

$16a^2 - 18a + 5$

12) $(5n + 6)(5n - 5)$

$25n^2 + 5n - 30$

13) $(4p-1)^2$

$16p^2-8p+1$

14) $(7x-6)(5x+6)$

$35x^2+12x-36$

15) $(6n+3)(6n-4)$

$36n^2-6n-12$

16) $(8n+1)(6n-3)$

$48n^2-18n-3$

17) $(6k+5)(5k+5)$

$30k^2+55k+25$

18) $(3x-4)(4x+3)$

$12x^2-7x-12$

19) $(4a+2)(6a^2-a+2)$

$24a^3+8a^2+6a+4$

20) $(7k-3)(k^2-2k+7)$

$7k^3-17k^2+55k-21$

21) $(7r^2-6r-6)(2r-4)$

$14r^3-40r^2+12r+24$

22) $(n^2+6n-4)(2n-4)$

$2n^3+8n^2-32n+16$

23) $(6n^2-6n-5)(7n^2+6n-5)$

$42n^4-6n^3-101n^2+25$

24) $(m^2 - 7m - 6)(7m^2 - 3m - 7)$

$7m^4 - 52m^3 - 28m^2 + 67m + 42$

 Name_____

Order of Operations

Date_____ Period____

Evaluate each expression.

1) $(30 - 3) \div 3$

2) $(21 - 5) \div 8$

3) $1 + 7^2$

4) $5 \times 4 - 8$

5) $8 + 6 \times 9$

6) $3 + 17 \times 5$

7) $7 + 12 \times 11$

8) $15 + 40 \div 20$

9) $20 + 16 - 15$

10) $19 - 15 - 3$

11) $9 \times (3 + 3) \div 6$

12) $(9 + 18 - 3) \div 8$

13) $9 + 6 \div (8 - 2)$

14) $4(4 \div 2 + 4)$

15) $6 + (5 + 8) \times 4$

16) $6 \times 6 - (7 + 5)$

17) $(9 \times 2) \div (2 + 1)$

18) $2 - (4 + 3 - 6)$

19) $7 \times 7 - (8 - 2)$

20) $9 - 7 - 6 \div 6$

21) $(4 - 1 + 8 \div 8) \times 5$

22) $(10 \times 2) \div (1 + 1)$

23) $7 \times 9 - 7 - 3 \times 5$

24) $8 - 1 - (18 - 2) \div 8$

 Name_____

Order of Operations

Date_____ Period____

Evaluate each expression.

1) $(30 - 3) \div 3$

9

2) $(21 - 5) \div 8$

2

3) $1 + 7^2$

50

4) $5 \times 4 - 8$

12

5) $8 + 6 \times 9$

62

6) $3 + 17 \times 5$

88

7) $7 + 12 \times 11$

139

8) $15 + 40 \div 20$

17

9) $20 + 16 - 15$

21

10) $19 - 15 - 3$

1

11) $9 \times (3 + 3) \div 6$

9

12) $(9 + 18 - 3) \div 8$

3

13) $9 + 6 \div (8 - 2)$

10

14) $4(4 \div 2 + 4)$

24

15) $6 + (5 + 8) \times 4$

58

16) $6 \times 6 - (7 + 5)$

24

17) $(9 \times 2) \div (2 + 1)$

6

18) $2 - (4 + 3 - 6)$

1

19) $7 \times 7 - (8 - 2)$

43

20) $9 - 7 - 6 \div 6$

1

21) $(4 - 1 + 8 \div 8) \times 5$

20

22) $(10 \times 2) \div (1 + 1)$

10

23) $7 \times 9 - 7 - 3 \times 5$

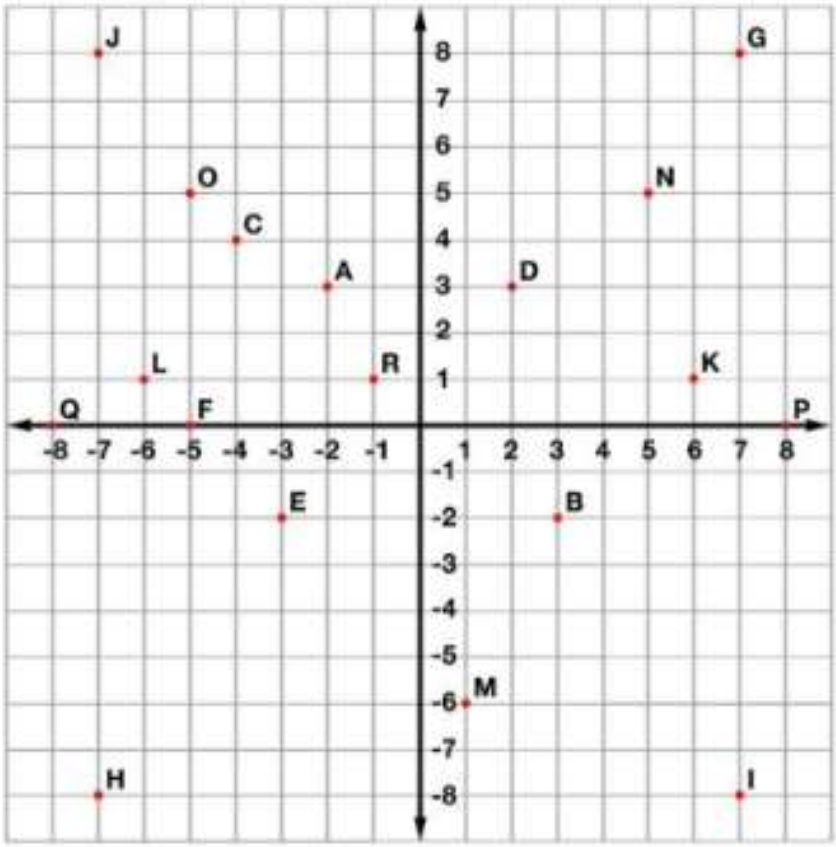
41

24) $8 - 1 - (18 - 2) \div 8$

5

Name: _____ Coordinate Plane & Ordered Pairs

Ordered Pairs



Tell what point is located at each ordered pair.

1. **(3,-2)** _____
2. **(2,3)** _____
3. **(-5,5)** _____
4. **(-7,-8)** _____
5. **(-4,4)** _____
6. **(-5,0)** _____

Write the ordered pair for each given point.

7. **E** _____
8. **M** _____
9. **P** _____
10. **G** _____
11. **Q** _____
12. **N** _____

Plot the following points on the coordinate grid.

13. **S (-6,-3)**
14. **T (2,-4)**
15. **U (5,8)**

 Name_____

Properties of Exponents

Date_____ Period____

Simplify. Your answer should contain only positive exponents.

1) $2m^2 \cdot 2m^3$

2) $m^4 \cdot 2m^{-3}$

3) $4r^{-3} \cdot 2r^2$

4) $4n^4 \cdot 2n^{-3}$

5) $2k^4 \cdot 4k$

6) $2x^3y^{-3} \cdot 2x^{-1}y^3$

7) $2y^2 \cdot 3x$

8) $4v^3 \cdot vu^2$

9) $4a^3b^2 \cdot 3a^{-4}b^{-3}$

10) $x^2y^{-4} \cdot x^3y^2$

11) $(x^2)^0$

12) $(2x^2)^{-4}$

13) $(4r^0)^4$

14) $(4a^3)^2$

15) $(3k^4)^4$

16) $(4xy)^{-1}$

17) $(2b^4)^{-1}$

18) $(x^2y^{-1})^2$

19) $(2x^4y^{-3})^{-1}$

20) $(3m)^{-2}$

21) $\frac{r^2}{2r^3}$

22) $\frac{x^{-1}}{4x^4}$

23) $\frac{3n^4}{3n^3}$

24) $\frac{m^4}{2m^4}$

25) $\frac{3m^{-4}}{m^3}$

26) $\frac{2x^4y^{-4}z^{-3}}{3x^2y^{-3}z^4}$

27) $\frac{4x^0y^{-2}z^3}{4x}$

28) $\frac{2h^3j^{-3}k^4}{3jk}$

29) $\frac{4m^4n^3p^3}{3m^2n^2p^4}$

30) $\frac{3x^3y^{-1}z^{-1}}{x^{-4}y^0z^0}$

Properties of Exponents

Date_____ Period____

Simplify. Your answer should contain only positive exponents.

1) $2m^2 \cdot 2m^3$

$4m^5$

2) $m^4 \cdot 2m^{-3}$

$2m$

3) $4r^{-3} \cdot 2r^2$

$\frac{8}{r}$

4) $4n^4 \cdot 2n^{-3}$

$8n$

5) $2k^4 \cdot 4k$

$8k^5$

6) $2x^3y^{-3} \cdot 2x^{-1}y^3$

$4x^2$

7) $2y^2 \cdot 3x$

$6y^2x$

8) $4v^3 \cdot vu^2$

$4v^4u^2$

9) $4a^3b^2 \cdot 3a^{-4}b^{-3}$

$\frac{12}{ab}$

10) $x^2y^{-4} \cdot x^3y^2$

$\frac{x^5}{y^2}$

11) $(x^2)^0$

1

12) $(2x^2)^{-4}$

$\frac{1}{16x^8}$

13) $(4r^0)^4$

256

14) $(4a^3)^2$

$16a^6$

15) $(3k^4)^4$

$81k^{16}$

16) $(4xy)^{-1}$

$\frac{1}{4xy}$

17) $(2b^4)^{-1}$

$\frac{1}{2b^4}$

18) $(x^2y^{-1})^2$

$\frac{x^4}{y^2}$

19) $(2x^4y^{-3})^{-1}$

$\frac{y^3}{2x^4}$

20) $(3m)^{-2}$

$\frac{1}{9m^2}$

21) $\frac{r^2}{2r^3}$

$\frac{1}{2r}$

22) $\frac{x^{-1}}{4x^4}$

$\frac{1}{4x^5}$

23) $\frac{3n^4}{3n^3}$

n

24) $\frac{m^4}{2m^4}$

$\frac{1}{2}$

25) $\frac{3m^{-4}}{m^3}$

$\frac{3}{m^7}$

26) $\frac{2x^4y^{-4}z^{-3}}{3x^2y^{-3}z^4}$

$\frac{2x^2}{3yz^7}$

27) $\frac{4x^0y^{-2}z^3}{4x}$

$\frac{z^3}{y^2x}$

28) $\frac{2h^3j^{-3}k^4}{3jk}$

$\frac{2h^3k^3}{3j^4}$

29) $\frac{4m^4n^3p^3}{3m^2n^2p^4}$

$\frac{4m^2n}{3p}$

30) $\frac{3x^3y^{-1}z^{-1}}{x^{-4}y^0z^0}$

$\frac{3x^7}{yz}$

Kuta Software - Infinite Pre-Algebra Name_____

Square Roots

Date_____ Period____

Find each square root.

1) $\sqrt{64}$

2) $\sqrt{36}$

3) $\sqrt{49}$

4) $\sqrt{0}$

5) $\sqrt{25}$

6) $\sqrt{1}$

7) $\sqrt{9}$

8) $\sqrt{4}$

Find each square root. Round to the nearest whole number.

9) $-\sqrt{200}$

10) $\sqrt{144}$

11) $-\sqrt{80}$

12) $-\sqrt{34}$

13) $-\sqrt{127}$

14) $\sqrt{1}$

15) $-\sqrt{36}$

16) $-\sqrt{148}$

Find each square root.

17) $-\sqrt{\frac{1}{4}}$

18) $\sqrt{\frac{81}{121}}$

19) $\sqrt{\frac{49}{196}}$

20) $\sqrt{\frac{81}{49}}$

21) $-\sqrt{\frac{25}{196}}$

22) $-\sqrt{\frac{196}{225}}$

Kuta Software - Infinite Pre-Algebra Name_____

Square Roots

Date_____ Period____

Find each square root.

1) $\sqrt{64}$

8

2) $\sqrt{36}$

6

3) $\sqrt{49}$

7

4) $\sqrt{0}$

0

5) $\sqrt{25}$

5

6) $\sqrt{1}$

1

7) $\sqrt{9}$

3

8) $\sqrt{4}$

2

Find each square root. Round to the nearest whole number.

9) $-\sqrt{200}$

-14

10) $\sqrt{144}$

12

11) $-\sqrt{80}$

-9

12) $-\sqrt{34}$

-6

13) $-\sqrt{127}$

-11

14) $\sqrt{1}$

1

15) $-\sqrt{36}$

-6

16) $-\sqrt{148}$

-12

Find each square root.

17) $-\sqrt{\frac{1}{4}}$

$-\frac{1}{2}$

18) $\sqrt{\frac{81}{121}}$

$\frac{9}{11}$

19) $\sqrt{\frac{49}{196}}$

$\frac{1}{2}$

20) $\sqrt{\frac{81}{49}}$

$1\frac{2}{7}$

21) $-\sqrt{\frac{25}{196}}$

$-\frac{5}{14}$

22) $-\sqrt{\frac{196}{225}}$

$-\frac{14}{15}$

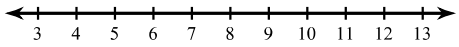
Kuta Software - Infinite Algebra 1 Name_____

Two-Step Inequalities

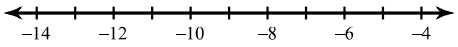
Date_____ Period____

Solve each inequality and graph its solution.

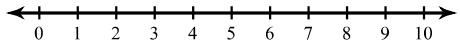
1) $2x + 4 \geq 24$



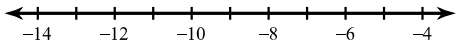
2) $\frac{m}{3} - 3 \leq -6$



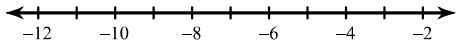
3) $-3(p + 1) \leq -18$



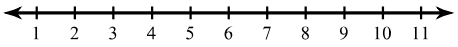
4) $-4(-4 + x) > 56$



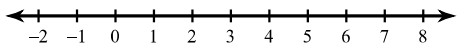
5) $-b - 2 > 8$



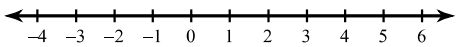
6) $-4(3 + n) > -32$



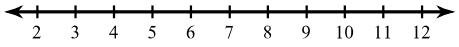
7) $4 + \frac{n}{3} < 6$



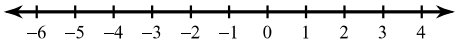
8) $-3(r - 4) \geq 0$



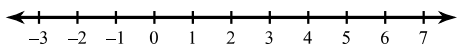
9) $-7x + 7 \leq -56$



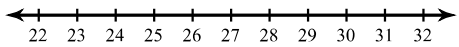
10) $-3(p - 7) \geq 21$



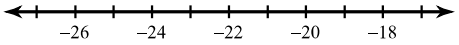
11) $-11x - 4 > -15$



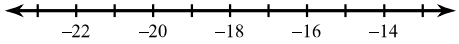
12) $\frac{-9 + a}{15} > 1$



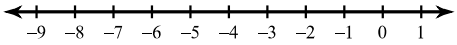
13) $-1 \le \frac{v-2}{21}$



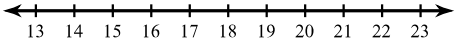
14) $-132 > 12(n+9)$



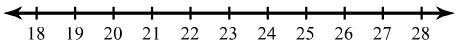
15) $\frac{-11+n}{15} < -1$



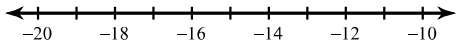
16) $-90 \ge -5(k-3)$



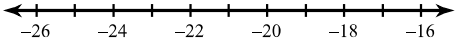
17) $4 < 1 + \frac{n}{7}$



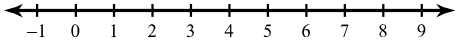
18) $-1 > \frac{12+x}{4}$



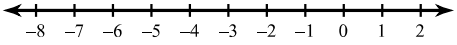
19) $7n - 1 > -169$



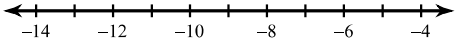
20) $-4b - 5 > -25$



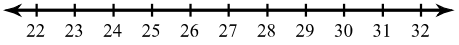
21) $84 \ge -7(v-9)$



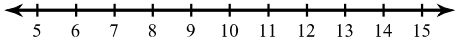
22) $\frac{-8+r}{2} > -8$



23) $\frac{x}{-6} - 8 \le -12$



24) $\frac{m-3}{2} \le 5$



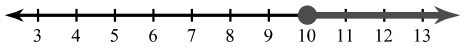
Kuta Software - Infinite Algebra 1 Name_____

Two-Step Inequalities

Date_____ Period____

Solve each inequality and graph its solution.

1) $2x + 4 \geq 24$



$x \geq 10$

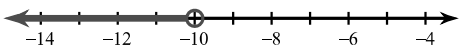
2) $\frac{m}{3} - 3 \leq -6$

$m \leq -9$

3) $-3(p + 1) \leq -18$

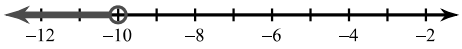
$p \geq 5$

4) $-4(-4 + x) > 56$



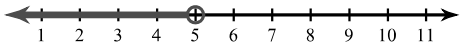
$x < -10$

5) $-b - 2 > 8$



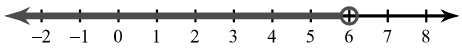
$b < -10$

6) $-4(3 + n) > -32$



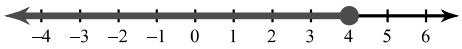
$n < 5$

7) $4 + \frac{n}{3} < 6$



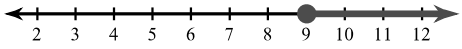
$n < 6$

8) $-3(r - 4) \geq 0$



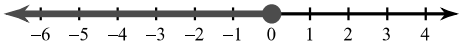
$r \leq 4$

9) $-7x + 7 \leq -56$



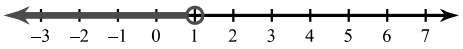
$x \geq 9$

10) $-3(p - 7) \geq 21$



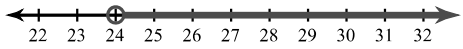
$p \leq 0$

11) $-11x - 4 > -15$



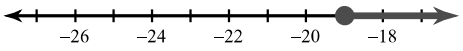
$x < 1$

12) $\frac{-9 + a}{15} > 1$



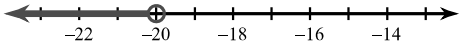
$a > 24$

13) $-1 \le \frac{v-2}{21}$



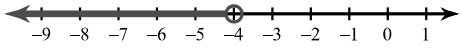
$v \ge -19$

14) $-132 > 12(n+9)$



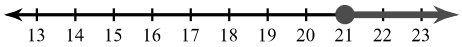
$n < -20$

15) $\frac{-11+n}{15} < -1$



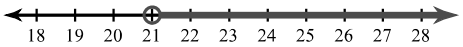
$n < -4$

16) $-90 \ge -5(k-3)$



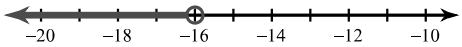
$k \ge 21$

17) $4 < 1 + \frac{n}{7}$



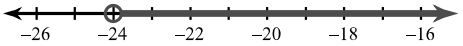
$n > 21$

18) $-1 > \frac{12+x}{4}$



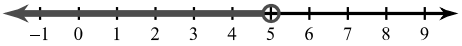
$x < -16$

19) $7n - 1 > -169$



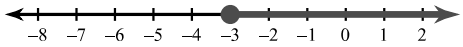
$n > -24$

20) $-4b - 5 > -25$



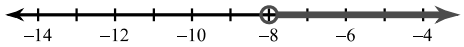
$b < 5$

21) $84 \ge -7(v-9)$



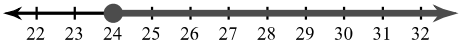
$v \ge -3$

22) $\frac{-8+r}{2} > -8$



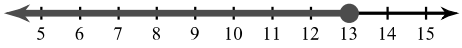
$r > -8$

23) $\frac{x}{-6} - 8 \le -12$



$x \ge 24$

24) $\frac{m-3}{2} \le 5$



$m \le 13$

Kuta Software - Infinite Algebra 1 Name_____

Multi-Step Equations

Date_____ Period____

Solve each equation.

1) $-20 = -4x - 6x$

2) $6 = 1 - 2n + 5$

3) $8x - 2 = -9 + 7x$

4) $a + 5 = -5a + 5$

5) $4m - 4 = 4m$

6) $p - 1 = 5p + 3p - 8$

7) $5p - 14 = 8p + 4$

8) $p - 4 = -9 + p$

9) $-8 = -(x + 4)$

10) $12 = -4(-6x - 3)$

11) $14 = -(p - 8)$

12) $-(7 - 4x) = 9$

13) $-18 - 6k = 6(1 + 3k)$

14) $5n + 34 = -2(1 - 7n)$

15) $2(4x - 3) - 8 = 4 + 2x$

16) $3n - 5 = -8(6 + 5n)$

17) $-(1 + 7x) - 6(-7 - x) = 36$

18) $-3(4x + 3) + 4(6x + 1) = 43$

19) $24a - 22 = -4(1 - 6a)$

20) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$

 Name_____

Multi-Step Equations

Date_____ Period____

Solve each equation.

1) $-20 = -4x - 6x$

{2}

2) $6 = 1 - 2n + 5$

{0}

3) $8x - 2 = -9 + 7x$

{–7}

4) $a + 5 = -5a + 5$

{0}

5) $4m - 4 = 4m$

No solution.

6) $p - 1 = 5p + 3p - 8$

{1}

7) $5p - 14 = 8p + 4$

{–6}

8) $p - 4 = -9 + p$

No solution.

9) $-8 = -(x + 4)$

{4}

10) $12 = -4(-6x - 3)$

{0}

11) $14 = -(p - 8)$

{–6}

12) $-(7 - 4x) = 9$

{4}

13) $-18 - 6k = 6(1 + 3k)$

{–1}

14) $5n + 34 = -2(1 - 7n)$

{4}

15) $2(4x - 3) - 8 = 4 + 2x$

{3}

16) $3n - 5 = -8(6 + 5n)$

{–1}

17) $-(1 + 7x) - 6(-7 - x) = 36$

{5}

18) $-3(4x + 3) + 4(6x + 1) = 43$

{4}

19) $24a - 22 = -4(1 - 6a)$

No solution.

20) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$

{–5}

Name_____

Variable and Verbal Expressions

Date_____ Period____

Write each as an algebraic expression.

1) the difference of 10 and 5

2) the quotient of 14 and 7

3) u decreased by 17

4) half of 14

5) x increased by 6

6) the product of x and 7

7) the sum of q and 8

8) 6 squared

9) twice q

10) the product of 8 and 12

11) the quotient of 18 and n

12) n cubed

Write each as a verbal expression.

13) $\frac{x}{2}$

14) $a + 9$

15) $19 - 3$

16) $5n$

17) q^2

18) $\frac{40}{5}$

19) $\frac{a}{8}$

20) $x + 8$

21) $n - 14$

22) 2^2

23) $\frac{60}{5}$

24) $n \cdot 6$

Evaluate each expression.

25) 5 squared

26) the product of 8 and 10

27) 20 decreased by 17

28) the quotient of 96 and 8

29) twice 6

30) 10 less than 17

31) 9 times 5

32) 10 increased by 8

33) 7 squared

34) the product of 4 and 5

Name_____

Variable and Verbal Expressions

Date_____ Period____

Write each as an algebraic expression.

1) the difference of 10 and 5

$10 - 5$

2) the quotient of 14 and 7

$\frac{14}{7}$

3) u decreased by 17

$u - 17$

4) half of 14

$\frac{14}{2}$

5) x increased by 6

$x + 6$

6) the product of x and 7

$x \cdot 7$

7) the sum of q and 8

$q + 8$

8) 6 squared

6^2

9) twice q

$2q$

10) the product of 8 and 12

$8 \cdot 12$

11) the quotient of 18 and n

$\frac{18}{n}$

12) n cubed

n^3

Write each as a verbal expression.

13) $\frac{x}{2}$

half of x

14) $a + 9$

a increased by 9

15) $19 - 3$

the difference of 19 and 3

16) $5n$

5 times a number

17) q^2

q squared

18) $\frac{40}{5}$

40 divided by 5

19) $\frac{a}{8}$

a divided by 8

20) $x + 8$

x plus 8

21) $n - 14$

a number minus 14

22) 2^2

2 squared

23) $\frac{60}{5}$

the quotient of 60 and 5

24) $n \cdot 6$

a number times 6

Evaluate each expression.

25) 5 squared

25

26) the product of 8 and 10

80

27) 20 decreased by 17

3

28) the quotient of 96 and 8

12

29) twice 6

12

30) 10 less than 17

7

31) 9 times 5

45

32) 10 increased by 8

18

33) 7 squared

49

34) the product of 4 and 5

20

Vocabulary

Sum – answer to an addition problem

Difference – answer to a subtraction problem

Product – answer to a multiplication problem

Quotient – answer to a division problem

Factor – a number being multiplied

Coefficient – the constant value of an algebraic expression

Expression – a sum, difference, product or quotient containing variables and/or constants

Equation – a defined relationship between two expressions

Simplify – to do all operations that can be done (if there is no equal sign, you cannot solve for the unknown)

Factoring – to reverse the process of multiplication in order to identify the original factors

Solve – only equations can be solved for a variable

Evaluate – use substitution to rewrite an expression using only constants and find the overall value

Radicand – the expression found under a radical hat

Index – AKA "root" of a radical expression

Constant – a number or symbol that represents a constant value ($\pi \approx 3.14, e \approx 2.72$)

Variable – represented with a letter; its value will vary (change)

Integer – (…, -3, -2, -1, 0, 1, 2, 3, …)

Irrational – a number that *cannot* be expressed as a fraction of integers ($\sqrt{3}, \pi, e, \dots$)

Rational – any number that can be expressed as a *fraction* of integers ($\frac{1}{3}, 2.5, \sqrt{25}, \frac{\sqrt[3]{27}}{\sqrt{16}}, \dots$)