Kuta Software - Infinite Pre-Algebra

Name_____

Evaluating Variable Expressions

Date_____

Evaluate each using the values given.

1) $n^2 - m$; use $m = 7$, and $n = 8$

57

2) $8(x - y)$; use $x = 5$, and $y = 2$

24

3) $yx \div 2$; use $x = 7$, and $y = 2$

7

4) $m - n \div 4$; use $m = 5$, and $n = 8$

3

5) $x - y + 6$; use $x = 6$, and $y = 1$

11

6) $z + x^3$; use $x = 1$, and $z = 19$

20

7) $y + yx$; use $x = 15$, and $y = 8$

128

8) $q \div 6 + p$; use $p = 10$, and $q = 12$

12

9) $x + 8 - y$; use $x = 20$, and $y = 17$

11

10) $15 - (m + p)$; use $m = 3$, and $p = 10$

2

11) $10 - x + y \div 2$; use $x = 5$, and $y = 2$

6

12) $p - 2 + qp$; use $p = 7$, and $q = 4$

33

13) $zy + 4y$; use $y = 5$, and $z = 2$

30

14) $b(a + b) + a$; use $a = 9$, and $b = 4$

61

15) $p^2 \div 4 - m$; use $m = 3$, and $p = 4$

1

16) $x(y \div 3)^2$; use $x = 4$, and $y = 9$

36

17) $4 + m + n - m$; use $m = 4$, and $n = 9$

13

18) $qp + q - p$; use $p = 7$, and $q = 3$

17

19) $mn \div 6 + 10$; use $m = 7$, and $n = 6$

17

20) $h + j(j - h)$; use $h = 2$, and $j = 6$

26

21) $(b - 1)^2 + a^2$; use $a = 6$, and $b = 1$

36

22) $y(x - (9 - 4y))$; use $x = 4$, and $y = 2$

6

23) $x - (x - (x - y^3))$; use $x = 9$, and $y = 1$

8

24) $j(h - 9)^3 + 2$; use $h = 9$, and $j = 8$

2

Kuta Software - Infinite Pre-Algebra Name_____

Simplifying Variable Expressions

Date_____ Period____

Simplify each expression.

1) $-3p + 6p$

$3p$

2) $b - 3 + 6 - 2b$

$-b + 3$

3) $7x - x$

$6x$

4) $7p - 10p$

$-3p$

5) $-10v + 6v$

$-4v$

6) $-9r + 10r$

r

7) $9 + 5r - 9r$

$9 - 4r$

8) $1 - 3v + 10$

$11 - 3v$

9) $5n + 9n$

$14n$

10) $4b + 6 - 4$

$4b + 2$

11) $35n - 1 + 46$

$35n + 45$

12) $-33v - 49v$

$-82v$

13) $30n + 8n$

$38n$

14) $7x + 31x$

$38x$

15) $10x + 36 - 38x - 47$

$-28x - 11$

16) $-2(7 - n) + 4$

$-10 + 2n$

17) $-8(-5b + 7) + 5b$

$45b - 56$

18) $-4p - (1 - 6p)$

$2p - 1$

19) $4 - 5(-4n + 3)$

$-11 + 20n$

20) $-7(k - 8) + 2k$

$-5k + 56$

21) $1 + 7(1 - 3b)$

$8 - 21b$

22) $3 - 8(7 - 5n)$

$-53 + 40n$

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Name_____

Multi-Step Equations

Date_____ Period__

Solve each equation.

1) $6a + 5a = -11$

{−1}

2) $-6n - 2n = 16$

{−2}

3) $4x + 6 + 3 = 17$

{2}

4) $0 = -5n - 2n$

{0}

5) $6r - 1 + 6r = 11$

{1}

6) $r + 11 + 8r = 29$

{2}

7) $-10 = -14v + 14v$

No solution.

8) $-10p + 9p = 12$

{−12}

9) $42 = 8m + 13m$

{2}

10) $a - 2 + 3 = -2$

{−3}

11) $18 = 3(3x - 6)$

{4}

12) $30 = -5(6n + 6)$

{−2}

13) $37 = -3 + 5(x + 6)$

{2}

14) $-13 = 5(1 + 4m) - 2m$

{–1}

15) $4(-x + 4) = 12$

{1}

16) $-2 = -(n - 8)$

{10}

17) $-6(1 - 5v) = 54$

{2}

18) $8 = 8v - 4(v + 8)$

{10}

19) $10(1 + 3b) = -20$

{–1}

20) $-5n - 8(1 + 7n) = -8$

{0}

21) $8(4k - 4) = -5k - 32$

{0}

22) $-8(-8x - 6) = -6x - 22$

{–1}

23) $8(1 + 5x) + 5 = 13 + 5x$

{0}

24) $-11 - 5a = 6(5a + 4)$

{–1}

Kuta Software - Infinite Pre-Algebra

Name_____

Two-Step Equations With Integers

Date_____ Period____

Solve each equation.

1) $\frac{r}{10} + 4 = 5$

{10}

2) $\frac{n}{2} + 5 = 3$

{–4}

3) $3p - 2 = -29$

{–9}

4) $1 - r = -5$

{6}

5) $\frac{k - 10}{2} = -7$

{–4}

6) $\frac{n - 5}{2} = 5$

{15}

7) $-9 + \frac{n}{4} = -7$

{8}

8) $\frac{9 + m}{3} = 2$

{–3}

9) $\frac{-5 + x}{22} = -1$

{–17}

10) $4n - 9 = -9$

{0}

11) $\frac{x + 9}{2} = 3$

{–3}

12) $\frac{-12 + x}{11} = -3$

{–21}

13) $\frac{-4 + x}{2} = 6$

{16}

14) $-5 + \frac{n}{3} = 0$

{15}

15) $\frac{p}{4} + 8 = 7$

{−4}

16) $9 + \frac{n}{4} = 15$

{24}

17) $6 + \frac{x}{2} = 4$

{−4}

18) $\frac{b + 11}{3} = -2$

{−17}

19) $\frac{a - 10}{3} = -4$

{−2}

20) $-12r + 4 = 100$

{−8}

21) $\frac{m}{16} - 9 = -8$

{16}

22) $-7 + 4r = -15$

{−2}

23) $\frac{m - 13}{2} = -8$

{−3}

24) $-5x + 13 = -17$

{6}

25) $\frac{k + 10}{-2} = 5$

{−20}

26) $\frac{p + 8}{-2} = 10$

{−28}

27) $-14r - 19 = 303$

{−23}

28) $\frac{x}{-4} - 5 = -8$

{12}

Kuta Software - Infinite Pre-Algebra

Name_____

Solving Two-Step Inequalities

Date_____ Period____

Solve each inequality and graph its solution.

1) $\frac{n}{3} + 2 > 0$

$n > -6$

2) $\frac{p}{9} - 1 \leq -2$

$p \leq -9$

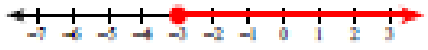
3) $\frac{x}{1} + 5 > 5$

$x > 0$

4) $\frac{1 + m}{9} \geq 1$

$m \geq 8$

5) $-2r - 2 \leq 4$



$r \geq -3$

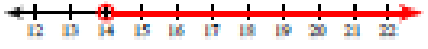
6) $8x + 2 \leq 138$

$x \leq 17$

7) $3 + \frac{b}{9} < 4$

$b < 9$

8) $9 + \frac{n}{2} > 16$



$n > 14$

9) $-7v + 5 \geq -79$

$v \leq 12$

10) $\frac{n+3}{2} > -2$

$n > -7$

11) $4 > \frac{a+1}{2}$

$a < 7$

12) $-2 + \frac{x}{2} > 6$

$x > 16$

13) $60 > 5 - 5n$

$n > -11$

14) $\frac{x+1}{2} \geq -4$

$x \geq -9$

15) $6 \leq 5 + \frac{p}{20}$

$p \geq 20$

16) $-18 + \frac{k}{3} \leq -26$

$k \leq -24$

Kuta Software - Infinite Algebra 1

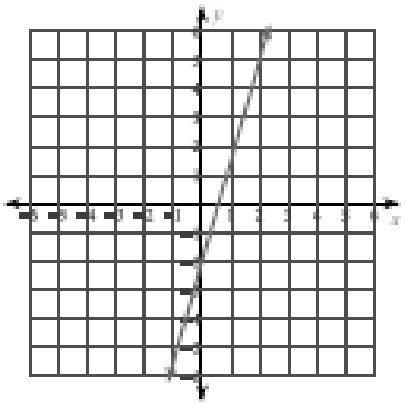
Name_____

Graphing Lines

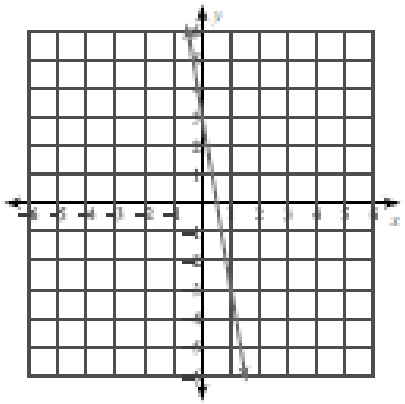
Date_____ Period____

Sketch the graph of each line.

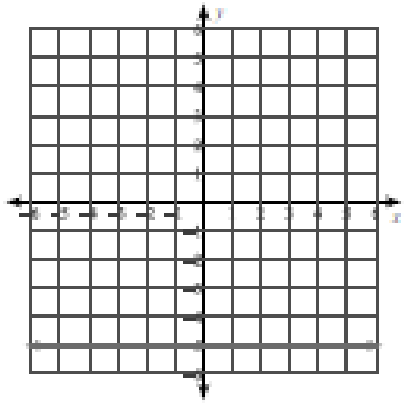
1) $y = \frac{7}{2}x - 2$



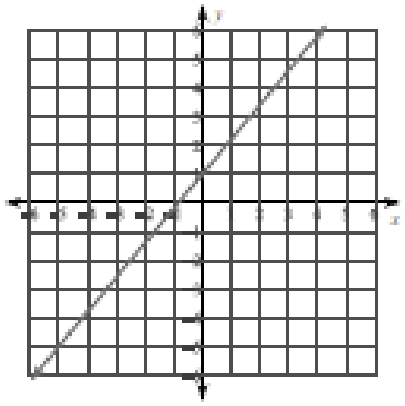
2) $y = -6x + 3$



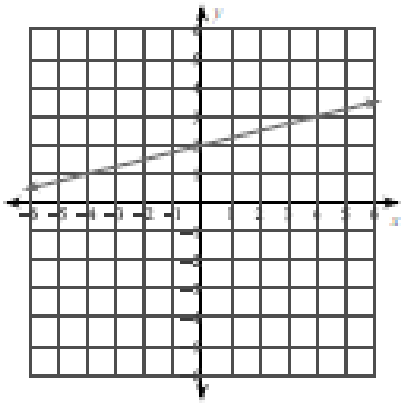
3) $y = -5$



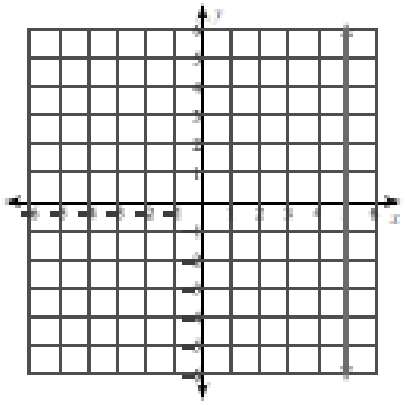
4) $y = \frac{6}{5}x + 1$



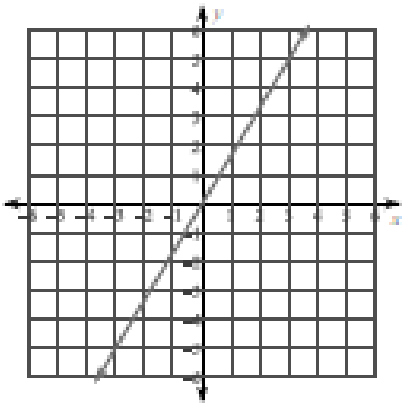
5) $y = \frac{1}{4}x + 2$



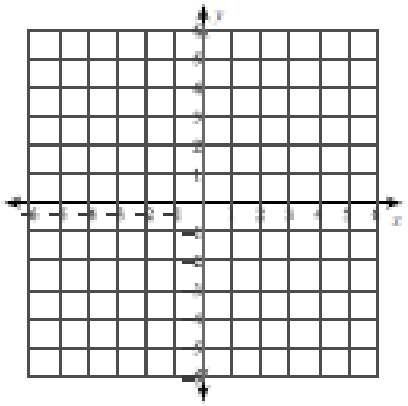
6) $x = 5$



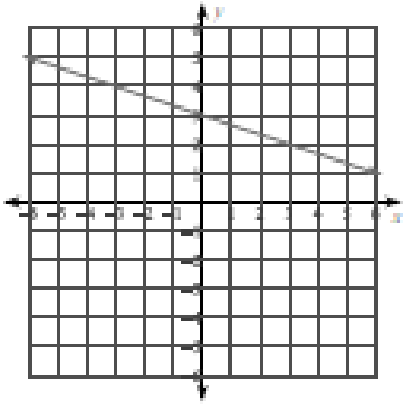
7) $y = \frac{5}{3}x$



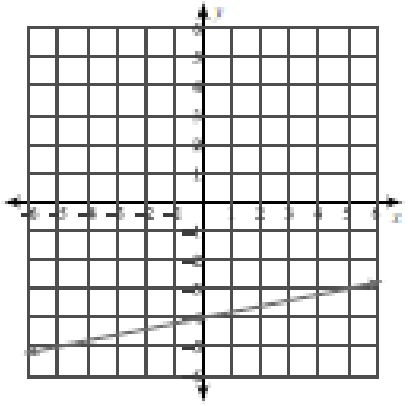
8) $x = 0$



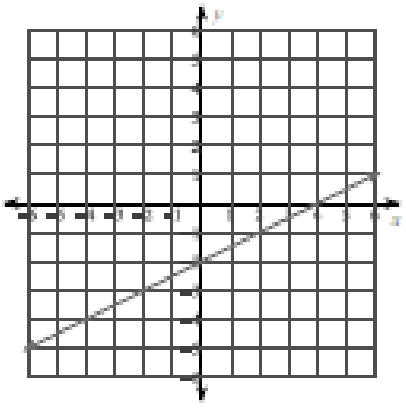
9) $y = -\frac{1}{5}x + 3$



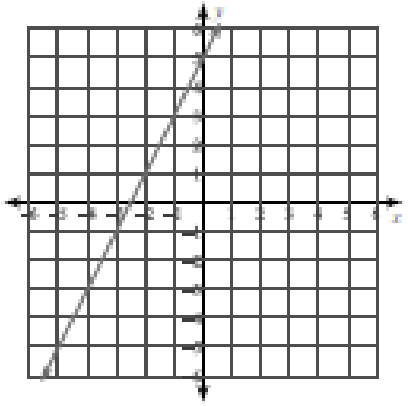
10) $y = \frac{1}{5}x - 4$



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



12) $y = 2x + 5$



Kuta Software - Infinite Pre-Algebra

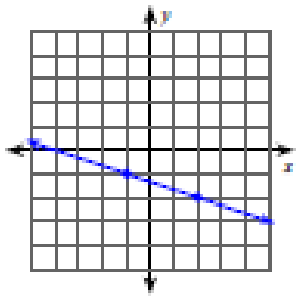
Name_____

Slope

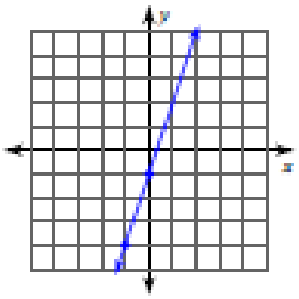
Date_____ Period____

Find the slope of each line.

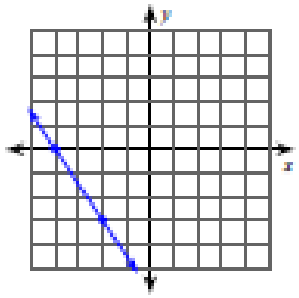
1) $-\frac{1}{3}$



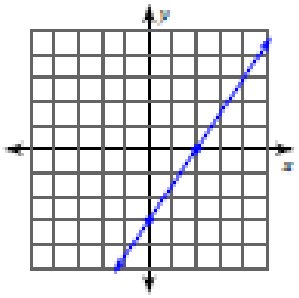
2) 3



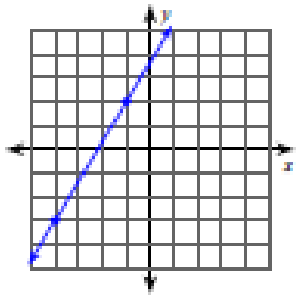
3) $-\frac{3}{2}$



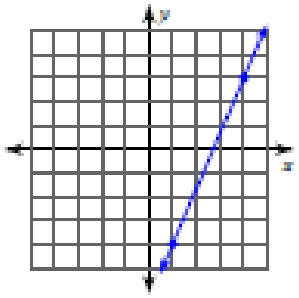
4) $\frac{3}{2}$



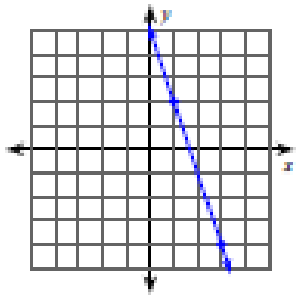
5) $\frac{5}{3}$



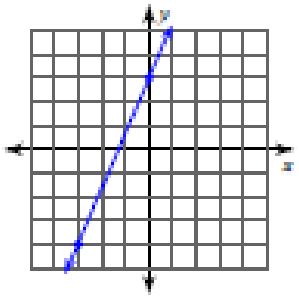
6) $\frac{7}{3}$



7) -3



8) $\frac{7}{3}$



Find the slope of the line through each pair of points.

9) $(8, 10), (-7, 14)$

$-\frac{4}{15}$

10) $(-3, 1), (-17, 2)$

$-\frac{1}{14}$

11) $(-20, -4), (-12, -10)$

$-\frac{3}{4}$

12) $(-12, -5), (0, -8)$

$-\frac{1}{4}$

13) $(-19, -6), (15, 16)$

$\frac{11}{17}$

14) $(-6, 9), (7, -9)$

$-\frac{18}{13}$

15) $(-18, -20), (-18, -15)$

Undefined

16) $(12, -18), (11, 12)$

-30

Find the slope of each line.

17) $y = -5x - 1$

-5

18) $y = \frac{1}{3}x - 4$

$\frac{1}{3}$

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

$-\frac{1}{5}$

20) $x = 1$

Undefined

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

$\frac{1}{4}$

22) $y = -\frac{2}{3}x - 1$

$-\frac{2}{3}$

23) $y = -x + 2$

-1

24) $y = -x - 1$

-1

25) $2x + 3y = 9$

$-\frac{2}{3}$

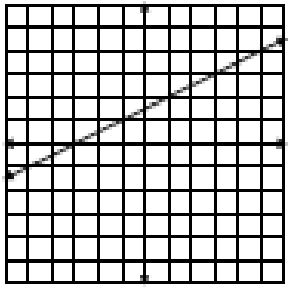
26) $5x + 2y = 6$

$-\frac{5}{2}$

Idenitfying Slope Types
ANSWER KEY

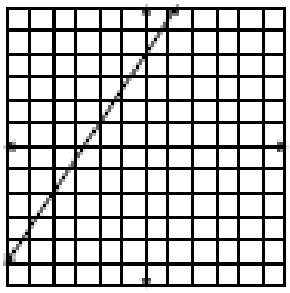
Write the type of slope in each graph: ***positive,negative,zero,*** or ***undefined.***

(1)



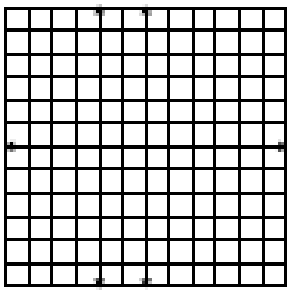
Type: positive

(2)



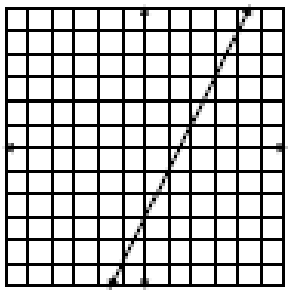
Type: positive

(3)



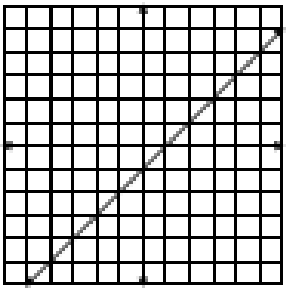
Type: undefined

(4)



Type: positive

(5)



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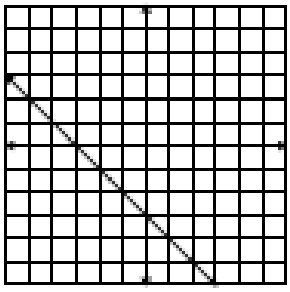
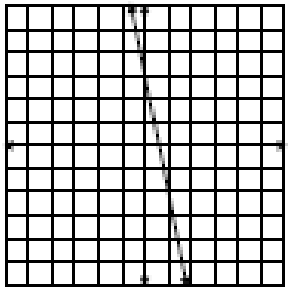
(6)



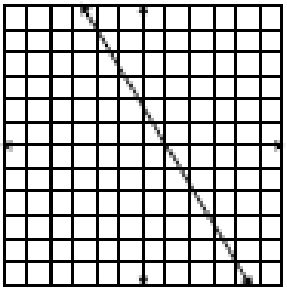
Type: negative

(7)



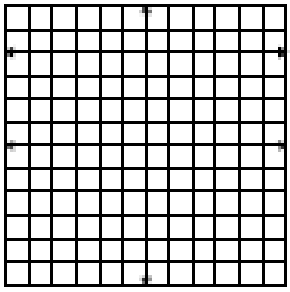
Type: negative

(8)



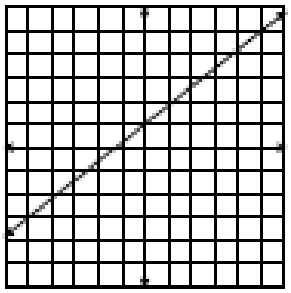
Type: negative

(9)



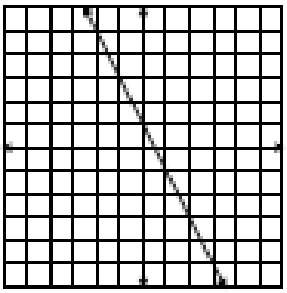
Type: zero

(10)



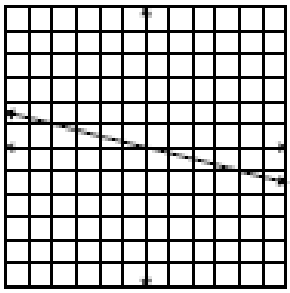
Type: positive

(11)



Type: negative

(12)



Type: negative