Kuta Software - Infinite Pre-Algebra

Name_____

Multi-Step Equations

Date_____ Period____

Solve each equation.

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

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

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

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

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

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

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

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

9) $42 = 8m + 13m$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Kuta Software - Infinite Pre-Algebra

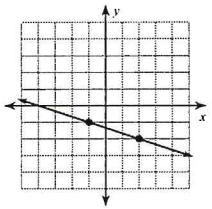
Name_____

Slope

Date_____ Period____

Find the slope of each line.

1)



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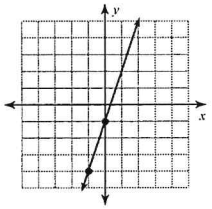
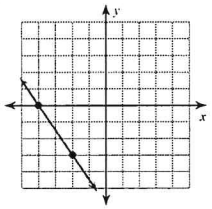


3)



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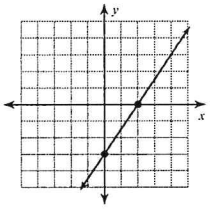
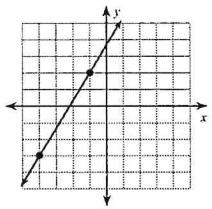
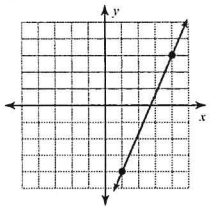


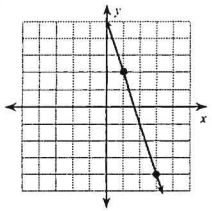
5)



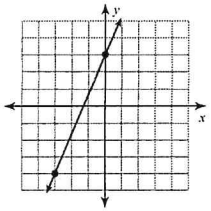
6)



7)



8)



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

9) (8, 10), (–7, 14)

10) (–3, 1), (–17, 2)

11) (–20, –4), (–12, –10)

12) (–12, –5), (0, –8)

13) (–19, –6), (15, 16)

14) (–6, 9), (7, –9)

15) (–18, –20), (–18, –15)

16) (12, –18), (11, 12)

Find the slope of each line.

17) $y = -5x - 1$

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

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

20) $x = 1$

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

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

23) $y = -x + 2$

24) $y = -x - 1$

[redacted]

[redacted]

Kuta Software - Infinite Pre-Algebra

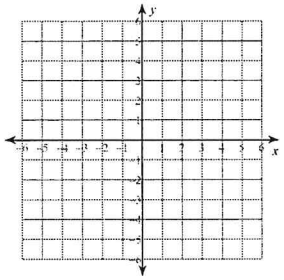
Name_____

Graphing Lines in Slope-Intercept Form

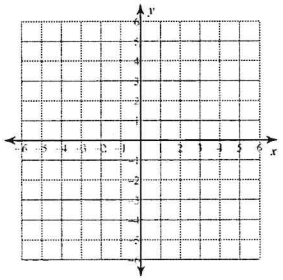
Date_____ Period____

Sketch the graph of each line.

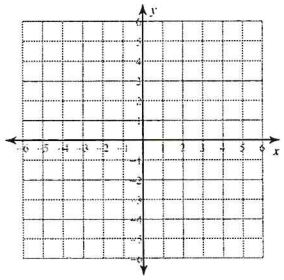
1) $y = \frac{1}{4}x - 1$



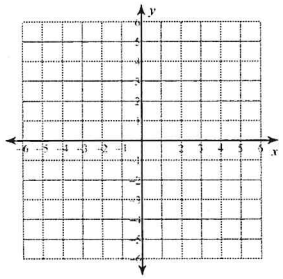
2) $y = -x + 2$



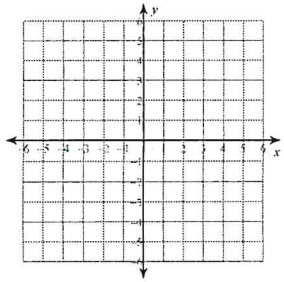
3) $y = x + 1$



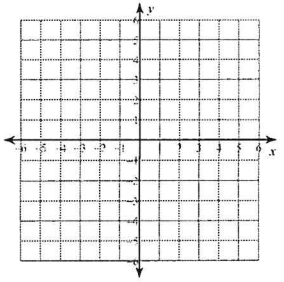
4) $y = \frac{4}{3}x - 4$



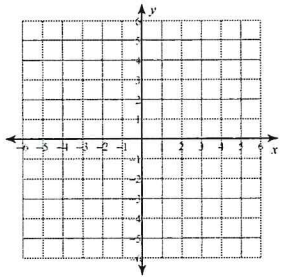
5) $y = -3x - 3$



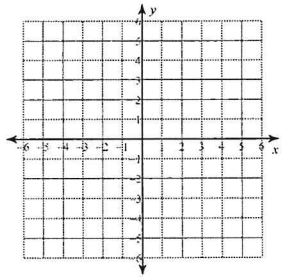
6) $y = 4$



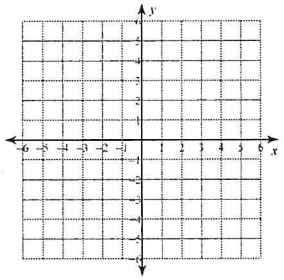
7) $y = \frac{3}{5}x - 1$



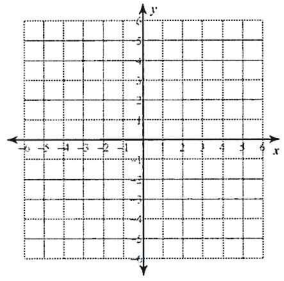
8) $x = 5$



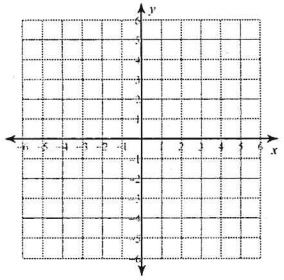
9) $y = 3$



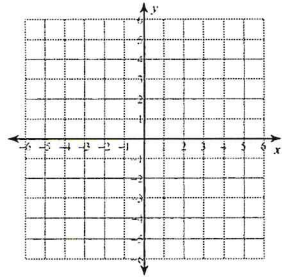
10) $y = 3x - 2$



11) $y = 4x + 3$



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



Kuta Software - Infinite Pre-Algebra

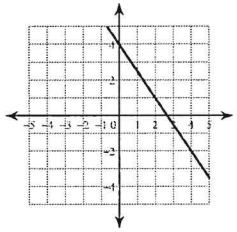
Name_____

Writing Linear Equations

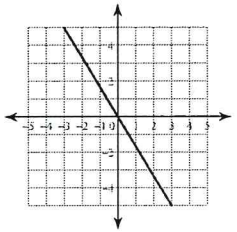
Date_____ Period____

Write the slope-intercept form of the equation of each line.

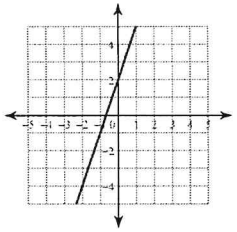
1)



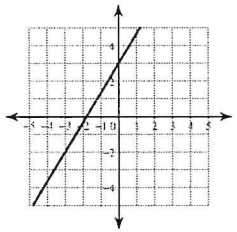
2)



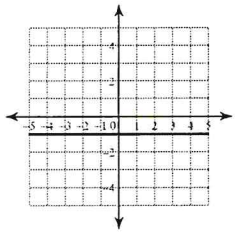
3)



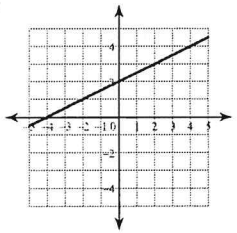
4)



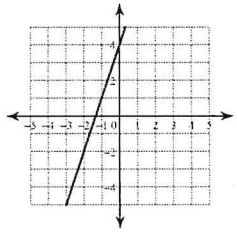
5)



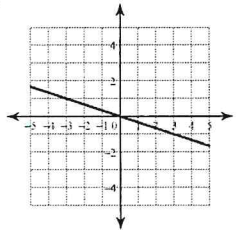
6)



7)



8)



Kuta Software - Infinite Pre-Algebra

Name_____

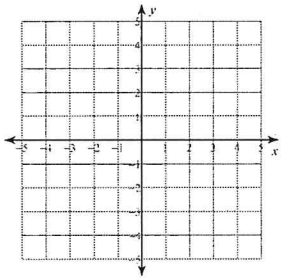
Solving Systems of Equations by Graphing

Date_____ Period____

Solve each system by graphing.

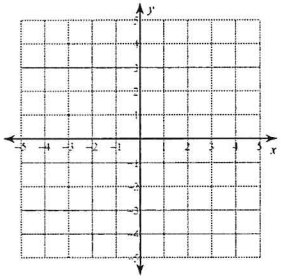
1) $y = \frac{1}{3}x - 4$

$y = -\frac{7}{3}x + 4$



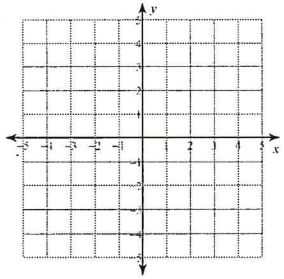
2) $y = \frac{1}{3}x + 3$

$y = 2x - 2$



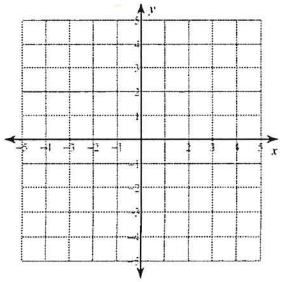
3) $y = -7x - 3$

$y = 4$



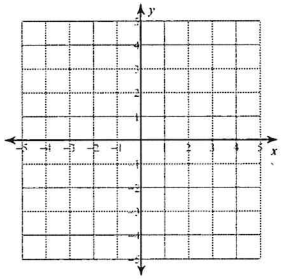
4) $y = -\frac{2}{3}x - 2$

$y = -\frac{8}{3}x + 4$



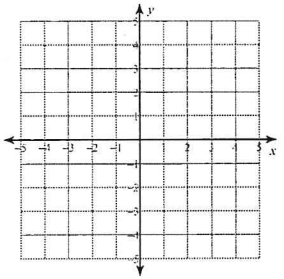
5) $y = -\frac{2}{3}x - 3$

$y = -\frac{2}{3}x + 4$



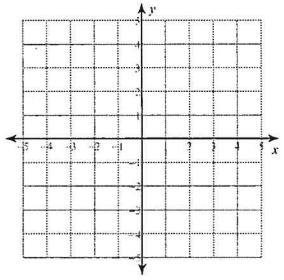
6) $y = -6x - 3$

$y = -x + 2$



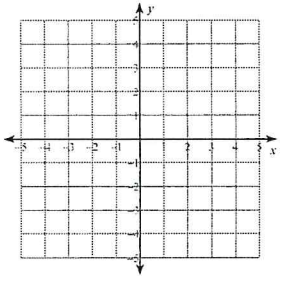
7) $y = -\frac{3}{4}x + 4$

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



8) $y = \frac{5}{2}x - 4$

$y = -x + 3$



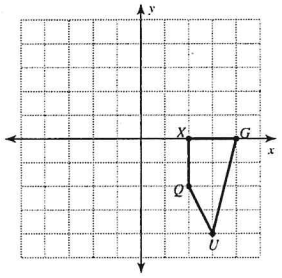
Kuta Software - Infinite Pre-Algebra Name_____

Translations of Shapes

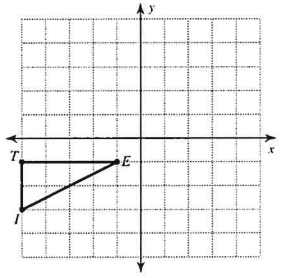
Date_____ Period____

Graph the image of the figure using the transformation given.

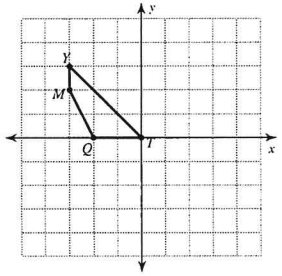
1) translation: 1 unit left



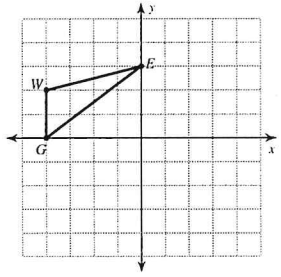
2) translation: 1 unit right and 2 units down



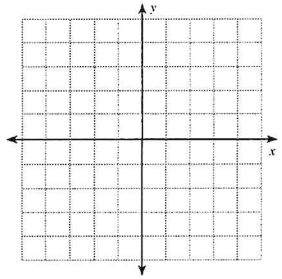
3) translation: 3 units right



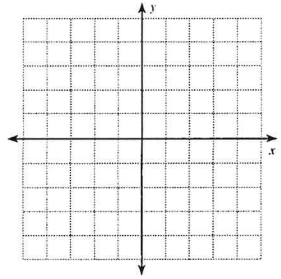
4) translation: 1 unit right and 2 units down



5) translation: 5 units up
$U(-3, -4)$, $M(-1, -1)$, $L(-2, -5)$



6) translation: 3 units up
$R(-4, -3)$, $D(-4, 0)$, $L(0, 0)$, $F(0, -3)$



Find the coordinates of the vertices of each figure after the given transformation.

7) translation: 2 units left and 1 unit down
$Q(0, -1)$, $D(-2, 2)$, $V(2, 4)$, $J(3, 0)$

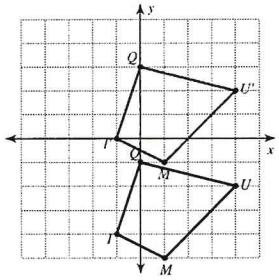
8) translation: 2 units down
$D(-4, 1)$, $A(-2, 5)$, $S(-1, 4)$, $N(-1, 2)$

9) translation: 4 units left and 4 units up
$J(-1, -2)$, $A(-1, 0)$, $N(3, -3)$

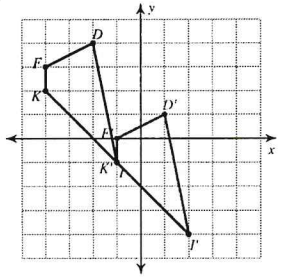
10) translation: 3 units right and 4 units up
$Z(-4, -3)$, $I(-2, -2)$, $V(-2, -4)$

Write a rule to describe each transformation.

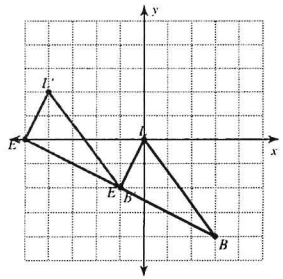
11)



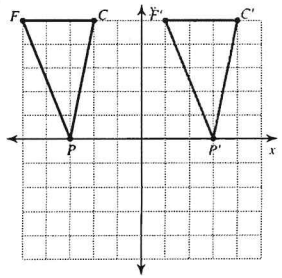
12)



13)



14)



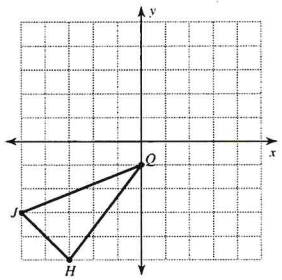
Kuta Software - Infinite Pre-Algebra Name_____

Rotations of Shapes

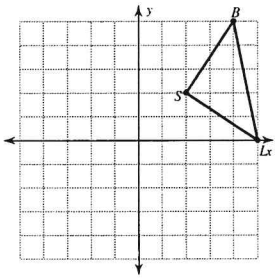
Date_____ Period____

Graph the image of the figure using the transformation given.

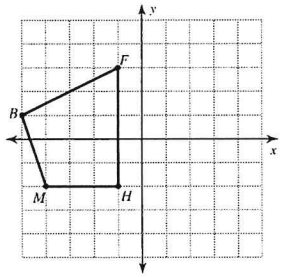
1) rotation 180° about the origin



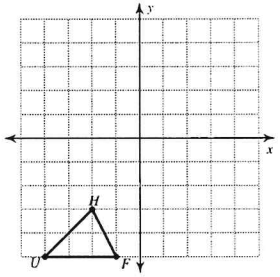
2) rotation 90° counterclockwise about the origin



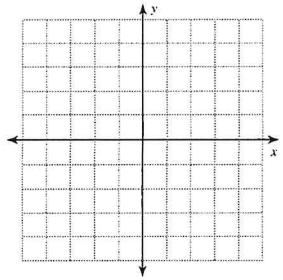
3) rotation 90° clockwise about the origin



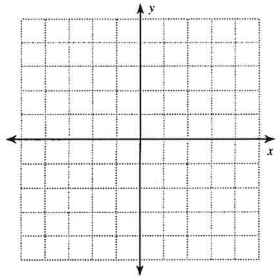
4) rotation 180° about the origin



5) rotation 90° clockwise about the origin
$U(1, -2)$, $W(0, 2)$, $K(3, 2)$, $G(3, -3)$



6) rotation 180° about the origin
$V(2, 0)$, $S(1, 3)$, $G(5, 0)$



Find the coordinates of the vertices of each figure after the given transformation.

7) rotation 180° about the origin
$Z(-1, -5)$, $K(-1, 0)$, $C(1, 1)$, $N(3, -2)$

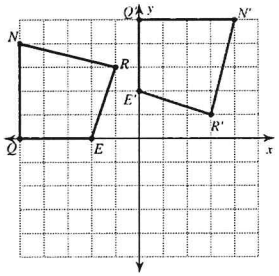
8) rotation 180° about the origin
$L(1, 3)$, $Z(5, 5)$, $F(4, 2)$

9) rotation 90° clockwise about the origin
$S(1, -4)$, $W(1, 0)$, $J(3, -4)$

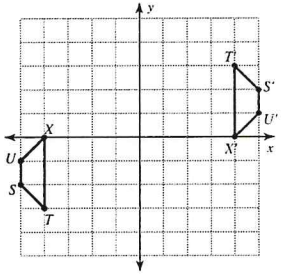
10) rotation 180° about the origin
$V(-5, -3)$, $A(-3, 1)$, $G(0, -3)$

Write a rule to describe each transformation.

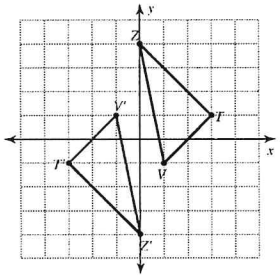
11)



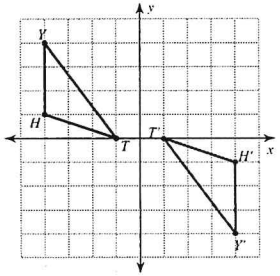
12)



13)



14)



Kuta Software - Infinite Pre-Algebra

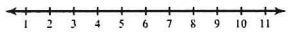
Name_____

Solving Multi-Step Inequalities

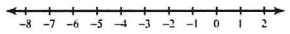
Date_____ Period____

Solve each inequality and graph its solution.

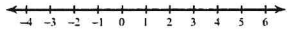
1) $-11 \geq 6 - 2n - 5$



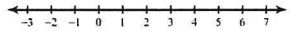
2) $0 > -5x - 6x$



3) $x + 1 + 4 \leq 9$

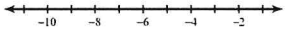


4) $-9 > -5n - 4n$

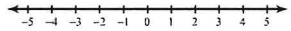


5) $5k - 2k > -9$

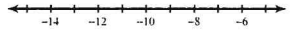
6) $-2 \geq 4p + 6 + 4$



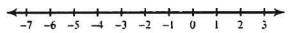
7) $30 - 6a < -3(5 + 7a)$



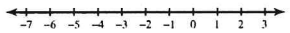
8) $33 + 4x \leq -(x + 7)$



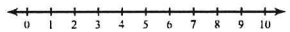
9) $2(6 + 4n) \geq 12 - 8n$



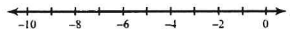
10) $-5(2b + 7) + b < -b - 11$



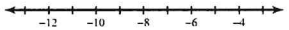
11) $-33 - n \leq -3(2n + 1)$



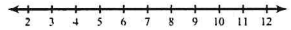
12) $-3(-7p - 6) - 7 < p - 29$



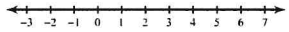
13) $-x + 23 < 2 - 2(x - 8)$



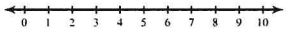
14) $32 - 5n \geq 7 - 5(n - 5)$



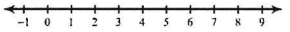
15) $12(10b - 9) > -12(9 + 8b)$



16) $-2(k - 12) - 5(k + 2) < -9k + 4k$



17) $8(1 + 8x) + 8(x - 11) < -10x + 2x$



18) $-2(9r + 3) - 7r \geq -10r - (12r + 9)$