Summer Assignment

Honors Geometry

This assignment will help you prepare for Honors Geometry by reviewing concepts you learned in Honors Algebra II.

Infinite Algebra 1

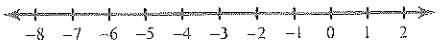
Name_____

Multi-Step Inequalities

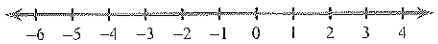
Date_____ Period____

Solve each inequality and graph its solution.

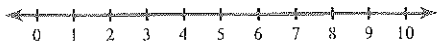
1) $3 < -5n + 2n$



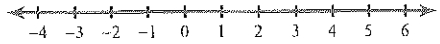
2) $6x + 2 + 6x < 14$



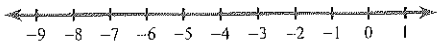
3) $-p - 4p > -10$



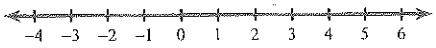
4) $18 \geq 5k + 4k$



5) $9 \geq -2m + 2 - 3$

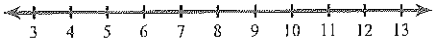


6) $-3 - 6(4x + 6) > -111$

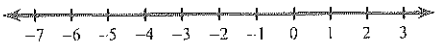


7) $6 - 4(6n + 7) \geq 122$

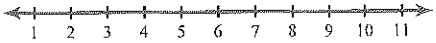
8) $-138 \geq -6(6b - 7)$



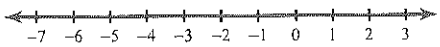
9) $167 < 6 + 7(2 - 7r)$



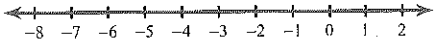
10) $5(6 + 3r) + 7 \geq 127$



11) $-8x + 2x - 16 < -5x + 7x$



12) $-1 - 6x - 6 > -11 - 7x$



Kuta Software - Infinite Algebra 2

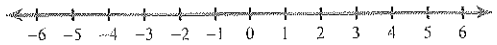
Name_____

Absolute Value Inequalities

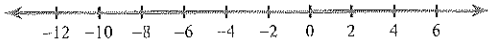
Date_____ Period____

Solve each inequality and graph its solution.

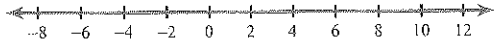
1) $|6n| \leq 18$



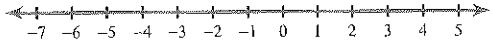
2) $|p + 4| \leq 8$



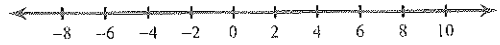
3) $|m - 2| < 8$



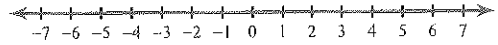
4) $|5x| \leq 10$



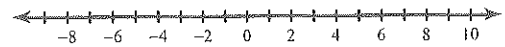
5) $|x| + 5 \geq 11$



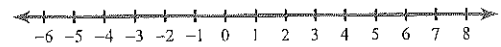
6) $|m| - 2 > 0$



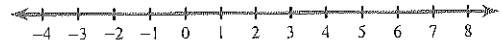
7) $|r| - 3 > 2$



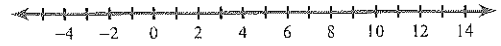
8) $|n| + 2 \geq 5$



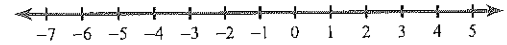
9) $|x - 2| - 5 < -2$



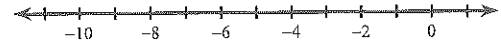
10) $|x - 4| - 3 < 5$



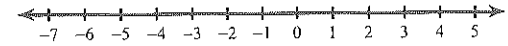
11) $1 + |1 + b| < 4$



12) $|v + 5| - 6 < -5$



13) $|10p - 4| < 34$



14) $|6 + 9x| \leq 24$

Algebra 1 Name_____

Writing Equations of Parallel and Perpendicular Lines

Period____

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

1) through: $(2, 2)$, parallel to $y = x + 4$

2) through: $(4, 3)$, parallel to $x = 0$

3) through: $(2, -4)$, parallel to $y = 3x + 2$

4) through: $(2, -1)$, parallel to $y = -\frac{2}{5}x + 3$

5) through: $(1, -5)$, perp. to $y = \frac{1}{8}x + 2$

6) through: $(4, -1)$, perp. to $y = x + 2$

7) through: $(-5, 5)$, perp. to $y = \frac{5}{9}x - 4$

8) through: $(3, 4)$, perp. to $y = -2x - 4$

Write the standard form of the equation of the line described.

9) through: $(4, 4)$, parallel to $y = -6x + 5$

10) through: $(-5, 5)$, parallel to $y = -3x + 3$

11) through: $(3, -2)$, perp. to $y = 5x + 4$

12) through: $(3, 1)$, perp. to $y = -\frac{2}{3}x + 4$

Write the standard form of the equation of each line.

13) $y = 3x + 1$

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

15) Slope = 1, y-intercept = 0

16) Slope = $-\frac{7}{2}$, y-intercept = 2

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

18) $y - 4 = -\frac{6}{5}(x + 5)$

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

19) $y - 1 = 2(x - 2)$

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

Solve each system by substitution.

11) $x + 3y = 1$
$-3x - 3y = -15$

12) $-3x - 8y = 20$
$-5x + y = 19$

13) $-3x + 3y = 4$
$-x + y = 3$

14) $-3x + 3y = 3$
$-5x + y = 13$

15) $6x + 6y = -6$
$5x + y = -13$

16) $2x + y = 20$
$6x - 5y = 12$

17) $-3x - 4y = 2$
$3x + 3y = -3$

18) $-2x + 6y = 6$
$-7x + 8y = -5$

19) $-5x - 8y = 17$
$2x - 7y = -17$

20) $-2x - y = -9$
$5x - 2y = 18$

Solve each system by elimination

13) $16x - 10y = 10$
$-8x - 6y = 6$

14) $8x + 14y = 4$
$-6x - 7y = -10$

15) $-4x - 15y = -17$
$-x + 5y = -13$

16) $-x - 7y = 14$
$-4x - 14y = 28$

17) $-7x - 8y = 9$
$-4x + 9y = -22$

18) $5x + 4y = -30$
$3x - 9y = -18$

19) $-4x - 2y = 14$
$-10x + 7y = -25$

20) $3x - 2y = 2$
$5x - 5y = 10$

21) $5x + 4y = -14$
$3x + 6y = 6$

22) $2x + 8y = 6$
$-5x - 20y = -15$

23) $-14 = -20y - 7x$
$10y + 4 = 2x$

24) $3 + 2x - y = 0$
$-3 - 7y = 10x$

Algebra 1 Mrs. Grieser Name_____

Solve Quadratics Using the Quadratic Formula

Date_____ Block____

1) State the formula for the Quadratic Formula:

2) State the formula for the discriminant, and describe how to interpret it.

Use the discriminant to determine the number of real solutions to each equation.

3) $2k^2 - 2k - 3 = 0$

4) $p^2 + 6p + 9 = 0$

5) $-6b^2 + 10b - 15 = -8$

6) $6n^2 + 2n - 10 = -2$

Solve each equation with the quadratic formula.

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

8) $4r^2 + 4r - 120 = 0$

9) $-3x^2 - 3x + 6 = 0$

10) $2x^2 - 8x + 8 = 0$

11) $6r^2 - 91 = 5$

12) $2x^2 + 2x + 7 = 2$

13) $2v^2 - 12v - 29 = 3$

14) $-2n^2 - 20 = -8$

15) $5n^2 - 3n - 24 = 0$

16) $8b^2 + 6b - 1 = 0$

17) $11m^2 - 6m + 7 = -4$

18) $5v^2 + 4v - 3 = 3$

Name_____

Adding, Subtracting, Multiplying Radicals

Date_____ Period____

Simplify.

1) $-5\sqrt{3} - 3\sqrt{3}$

2) $2\sqrt{8} - \sqrt{8}$

3) $-4\sqrt{6} - \sqrt{6}$

4) $-3\sqrt{5} + 2\sqrt{5}$

5) $-3\sqrt{27} - 3\sqrt{27} - 3\sqrt{27}$

6) $-3\sqrt{12} + 3\sqrt{3} + 3\sqrt{20}$

21) $\sqrt{15}(2\sqrt{10} - 4\sqrt{6})$

22) $(-7 + \sqrt{3x})(4 + \sqrt{3x})$

23) $(\sqrt{2a} - 5)(7\sqrt{2a} - 5)$

24) $(2 + \sqrt{5})(-2 + \sqrt{5k})$

25) $(\sqrt{3} + \sqrt{5x})(\sqrt{3} - 5\sqrt{5x})$

26) $(7 + \sqrt{6})(1 + \sqrt{6})$