

To earn your full participation point for the Do Now be sure to have completed all of the following by the time is up:

- 1) Be in your seat
- 2) Take out your calculator
- 3) Have last night's homework out
- 4) Complete the do now



Name: _____ Algebra 9 Unit 2 Test Review

Unit 2 Review – Linear Expressions, Equations and Inequalities

DO NOW ~ Monday 1/6

Write the following inequality in interval notation:

$-2 \leq x < 8$

Interval notation:

$[-2, 8)$

$(0) \quad [0]$



DO NOW ~ Tuesday 1/7

Solve the following equation:

$$\begin{array}{r} 1 \\ 0 \\ 0 \\ 2 \end{array}$$

$$\begin{array}{r} \curvearrowright \\ -2(x-4) = 20 \end{array}$$

$$\begin{array}{r|l} -2x+8 & = 20 \\ -8 & -8 \\ \hline -2x & = 12 \\ -2 & -2 \\ \hline \end{array}$$

$$x = -6$$



Mrs. Ferreri's Station ~ Word Problems**Show all of your work.**

1. The sum of two consecutive integers is -1 , the smaller integer is
A. 1 B. -2 C. -1 D. 0

2. If n is an odd integer, which equation can be used to find three consecutive odd integers whose sum is -3 ?
A. $n + (n + 1) + (n + 3) = -3$ B. $n + (n + 1) + (n + 2) = -3$
C. $n + (n + 2) + (n + 4) = -3$ D. $n + (n + 2) + (n + 3) = -3$

3. Mrs. Smith wrote "Eight less than three times a number is greater than fifteen" on the board. If x represents the number, which inequality is a correct translation of this statement?
A. $3x - 8 > 15$ B. $3x - 8 < 15$ C. $8 - 3x > 15$ D. $8 - 3x < 15$

4. Julie has three children whose ages are consecutive odd integers. If x represents the youngest child's age, which expression represents the sum of her children's ages?
A. $3x + 3$ B. $3x + 4$ C. $3x + 5$ D. $3x + 6$

Continue onto the next page.

5. Carol plans to sell twice as many magazine subscriptions as Jennifer. If Carol and Jennifer need to sell at least 90 subscriptions in all, which inequality could be used to determine how many subscriptions, x , Jennifer needs to sell?

A. $x \geq 45$ B. $2x \geq 90$ C. $2x - x \geq 90$ D. $2x + x \geq 90$

6. Which equation could be used to solve the problem below?

If three times a number is increased by 24, the result is 4 less than seven times the number.

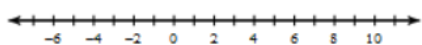
A. $3(x + 24) = 7x - 4$ B. $3x + 24 = 4 - 7x$ C. $3x + 24 = 7x - 4$ D. $27x = 7x - 4$

7. The statement "The sum of twice a number and 18 is greater than 25" can be expressed as

A. $2n + 18 = 25$ B. $2(n + 18) > 25$ C. $2(n + 18) > 50$ D. $2n + 18 > 25$

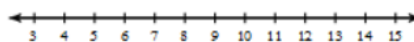
Computer Station ~ No Computer today...Compound Inequalities*Solve, graph and write in interval notation.*

$$38 \geq 4x + 2 > -14$$



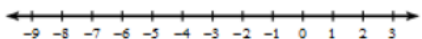
Interval Notation: _____

$$-11 \leq -2b + 5 \leq -3$$



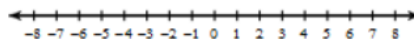
Interval Notation: _____

$$-54 < 10x + 6 \leq -34$$



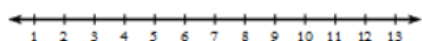
Interval Notation: _____

$$9 + 2b \leq -1 \text{ or } 2 - 5b < -23$$



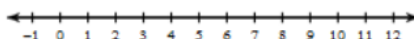
Interval Notation: _____

$$-10x - 3 \geq -63 \text{ or } 5x + 8 \geq 53$$



Interval Notation: _____

$$-4m - 7 \leq -35 \text{ or } 9 - 7m \geq -12$$



Interval Notation: _____

Mrs. Kennedy's Station ~ Solving Linear Equations

Solve the following equations. Show all of your work.

1) $-5 - 3n = 2n - 3 - 3 + 16$

2) $1 - 6n = -4n + 15$

3) $-5 + 5x = -2 + 4x$

4) $2r + 8 = r + 8$

Determine whether each of the following values for the given variable is a solution to the given equation. Show the substitution.

$-8 + 6a + 2a = 4a + 5a$ and $a = -8$

$m - 2 = 4 - 7m + 6 - 12$ and $m = 0$

$6m - 5 = 2m + 5m - 13$ and $m = 10$

$6m - 3 = 7 + 8m$ and $m = -2$

Continue onto the next page.

Solve the following equations. Show all of your work.

5) $-m - 3(5 + 6m) = -129$

6) $135 = -5(4x + 1)$

7) $8(2 + 5x) = -304$

8) $115 = 5(-2b + 7)$

Independent Station ~ Solving Inequalities**Show your work.**

1. Which value of x is in the solution set of the inequality $-4x + 2 > 10$?
A. -2 B. 2 C. 3 D. -4

2. Which statement is equivalent to the inequality $9 - 4x \leq 3x - 5$?
A. $x > -2$ B. $x < 2$ C. $x \leq -2$ D. $x \geq 2$

3. The smallest whole number that satisfies the inequality $3x - 1 > 2$ is
A. 1 B. 2 C. 3 D. 0

4. Which inequality is equivalent to $2x + 6 > 2$?
A. $x > -2$ B. $x < -2$ C. $x > 2$ D. $x < 2$

Continue onto the next page.

5. Which number is in the solution set of the inequality $5x + 3 > 38$?

A. 5

B. 6

C. 7

D. 8

6. Which is the *smallest* integer that makes the inequality $2x + 3 > 5$ true?

A. 1

B. 2

C. 5

D. -4

7. Solve for x : $2x + 4 \leq 12$

8. Which value of x is in the solution set of the inequality $-2(x - 5) < 4$?

A. 0

B. 2

C. 3

D. 5

Monday 1/6 Homework – Finish the two stations you were at today.

Tuesday 1/7 Homework – Finish the two stations you were at today.