

Unit 2 Review

You must score an 70% on the test to move on. If you need more review you can do the Test Corrective Assignment before you take the test. When you are done make sure you check your answers and ask for help on anything you may have missed. The ACTUAL test will be longer so make sure you review old packets as well!

NAME: _____

Directions: Describe the solution set.

$$1) x + 7 \leq 3$$

Verbally:

Graphically:



Set Notation:

Directions: Solve each equation. Put your solution into set notation.

$$2) 2b + 7 + b = 10b - 18 - 7b$$

3) $8(x + 3) - 5x = 6(4 + 5x)$

*Do you know when the solution is $\{ \}$ and $\{\text{All real Numbers}\}$?

Directions: Solve each inequality. Express the solution graphically and in set notation.

4) $92 > -4(x - 9)$

Directions: Solve and state any excluded values.

$$5) \frac{140}{-2y+8} + 4 = 11$$



*Do you know when the solution is $\{ \}$ and $\{\text{All real Numbers}\}$?

*Do you know what happens when the excluded value is the same as the solution?

Directions: Solve each equation for the indicated variable.

6) $A = \frac{1}{2}h(b_1 + b_2)$, for h .

7) $mn + p = mq$, for m .

8) Mr. Kelly is super slow at grading Mastery Checks. There is currently a line with 3 people in it. Every minute the line gets 2 more people. He really hopes to not to reach 15 people or else Sully will likely come in and put him on BLAST (or something else hip kids say).

a) Pick variables and define them for this situation.

b) Create an equation using your variables to model the situation.

c) Solve the equation to find out how long it will be before Mr. Kelly has 15 people in line.

9) Write an **inequality** that satisfies the given solution set with conditions.

a) $\{x \text{ real} \mid x > -3\}$ where there is at least one operation.

10) Mr. Bean just won the lottery and is going to pay it forward! He's going to give students he sees in the hall \$4 and teachers he sees in the hall \$7. Even though he won \$100,000,000,000 he's only willing to give out \$100. MAKE SURE YOU GO SEE HIM ON FRIDAY RIGHT AFTER THE FIRST PERIOD!

a) Create an equation to model this situation.

b) Solve your equation in terms of the variable you designated for the number of students that Mr. Bean gave money to.

UNIT 2 Performance Task: Talent Show

Name: _____

It would be a GREAT idea if you found someone else to work on this performance task with, or to bounce ideas off.

Remember to write out thoughts in complete sentences and show all mathematical thinking in the space provided.

Mr. Brust has decided to conduct his own search for the next great magician so he is going to hold his own talent search. He is going to give different prizes for the best 4 acts in the show that he holds. First place wins the most money, and each place after that wins \$100 less than the previous place.

1) Create a model that can be used to determine the total amount of prize money based on the value of the first place prize.

2) Mr. Brust is willing to give a total of \$1500 in prize money to the top 4 acts accordingly. What is the amount of money for EACH of the four prizes? Show your work.

3) Mr. Bean decides to hold his own contest, but he decides he will split his \$1500 in prize money to only the top three acts (First place wins the most money and each place after that wins \$100 less than the previous place). If you had a friend who wanted to enter one of the talent show's which show would you recommend for them to enter? Construct a viable argument to support your solution.

4) Is there ever a situation you would recommend your friend to enter the other show (the one you aren't recommending)? Construct a viable argument to support your solution.