Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_

Math 8 ACC: Midterm Review Answer Page

1) \_\_\_\_\_\_\_ 16) \_\_\_\_\_\_\_

2) \_\_\_\_\_\_\_ 17) \_\_\_\_\_\_\_

3) \_\_\_\_\_\_\_ 18) \_\_\_\_\_\_\_

4) \_\_\_\_\_\_\_ 19) \_\_\_\_\_\_\_

5) \_\_\_\_\_\_\_ 20) \_\_\_\_\_\_\_

6) \_\_\_\_\_\_\_ 21) \_\_\_\_\_\_\_

7) \_\_\_\_\_\_\_ 22) \_\_\_\_\_\_\_

8) \_\_\_\_\_\_\_ 23) \_\_\_\_\_\_\_

9) \_\_\_\_\_\_\_ 24) \_\_\_\_\_\_\_

10) \_\_\_\_\_\_\_ 25) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11) \_\_\_\_\_\_\_ 26) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) \_\_\_\_\_\_\_ 27) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13) \_\_\_\_\_\_\_ 28) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14) \_\_\_\_\_\_\_ 29) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15) \_\_\_\_\_\_\_ Context Explanation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 30) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(values of x)

 Did you put all the proper labeling on your graphs for #30???

Schedule for Midterm Review:

**Important Information and Guidance for Midterm Review:**

* Although the questions on the Midterm are very similar to this review….they ALL have been changed.
* Please make sure that you understand HOW to solve each question.
* Getting all the questions correct on the review is only cause for celebration if YOU got them correct because YOU understand them. This is the only way to ensure you do well on the midterm.

**GET THINKING ☺**

**Thursday: January 10, 2019**

* Class time will be used to work on the midterm review.
* Prep Task: Continue to work on the review packet and practice TI-84 commands we have learned.

**Friday: January 11, 2019**

* Continue to work on review packet. Class time will be used to work on the review.
* Prep Task: Continue to work on the review packet and practice TI-84 commands we have learned.
* Finalize your answers and fill in the answer sheet on the back of this schedule. You will have a chance to check it today, if you are finished.

**The midterm is scheduled 6th period on:**

**Thursday, January 17, 2019 (Multiple Choice)**

**AND**

**Friday, January 18, 2019 (Extended Response)**

**You will access to the TI-84 Graphing Calculator on**

**BOTH days of the exam.**

**New Paltz Middle School PRACTICE January 2019**

**Math 8 Accelerated Mid-Year Assessment Exam Part 1**

**Directions:**

1. A satellite television company charges a one-time installation fee and a monthly service charge. The total cost is modeled by the function *y* = 90 + 40*x*. What statement represents the meaning of each part of the function?

**A** *y* is the total cost, *x* is the number of months of service, $40 is the installation fee, and $90 is the service charge per month.

**B** *y* is the total cost, *x* is the number of months of service, $90 is the installation fee, and $40 is the service charge per month.

**C** *x* is the total cost, *y* is the number of months of service, $90 is the installation fee, and $40 is the service charge per month.

**D** *x* is the total cost, *y* is the number of months of service, $40 is the installation fee, and $90 is the service charge per month.

**2)** Which interval notation represents the set of all numbers from 2 < x ≤ 7?

**A** (2, 7] **C** [ 2, 7)

**B** ( 2, 7) **D** [ 2, 7]

**3)** Which property is illustrated by the equation (*ax + ay) + az = ax + (ay + az)* ?

**A** associative **C** distributive

**B** commutative **D**  identity

**4)** Which expression is equivalent to x4 + 12x2 + 36 ?

 **A** (x2 – 6) (x2 – 6) **C** (6 – x2) (6 + x2)

 **B** (x2 + 6) (x2 + 6)  **D**  (x2 + 6) (x2 – 6)

**5)** Which point is on the graph represented by *y* = *x*2 - 5*x* + 7 ?

 **A** (-6, 70) **C** (5, 7)

 **B** (-4, 45)  **D**  (3, 8)

**6)** What is an equation for the line that passes through the coordinates

 (0, 2) and (3, 0)?

**A** y = - x + 3 **C** y = - x + 2

**B** y = - x - 3 **D** y = - x - 2

**7)** A company produces x units of a product per month, where C(x) represents the total cost and *R(x)* represents the total revenue for the month.

 The functions are modeled by *C(x)* = 300*x* - 250. *R(x)* = – 0.5*x*2 + 800*x* + 100?

The profit is the difference between the revenue and the cost *P(x)* = *R(x)* – *C(x*).

What is the total profit *P(x)*, for the month?

 **A** *P(x)* = – 0.5*x*2 + 500*x* – 150

 **B** *P(x)* = – 0.5*x*2 + 500*x* – 350

 **C** *P(x)* = – 0.5*x*2 – 500*x* + 350

 **D**  *P(x)* = – 0.5*x*2 + 500*x* +350

**8)** Which of the following expressions is **not** equivalent to  **.**

 **A**  **C**  

 **B**  **D**  

**9)** What is the equation of the line for the graph below?

**A** 3y + 6 = 9x

**B** - 2y = 6x – 4

**C** y = $\frac{1}{3}$x – 2

**D** y = $\frac{1}{2}$x – 3

**10)** Table below shows 6 students overall averages and their averages in their math class.

**

If a linear model is applied to these data, which statement best describes the correlation coefficient?

**A** It is close to -0.92 **C** It is close to 0.

**B** It is close to 0.92 **D** It is close to 0.5.

**11)** The value of the **y-intercept** for the graph 4x – 5y = 40 is

 **A** 10 **C** –

 **B**  **D** –8

**12)** A trainer for a professional football team keeps track of the amount of water players consume throughout practice. The trainer observes that the amount of water consumed is a linear function of the temperature on a given day. The trainer finds that when it is 90°F the players consume 220 gallons of water and when it is 76°F the players consume 178 gallons of water. What linear function represents this situation?

**A** y = x – 50 **C** y = x + 50

**B** y = 3x – 50 **D** y = 3x + 50

**13)** Which value of x is *not permissible* for the expression ?

 **A** 2 **C** - 3

 **B** 0 **D** 9

Hint: The value of x that is not permissible will result in a 0 in the denominator when you substitute and solve.

**14)** Which inequality is represented by the graph below?

 **A** y < 2x + 1 **C** y < x + 1

 **B** y < - x + 1 **D** y < -2x + 1

**15)** What is the point that DOES NOT lie in the solution set of the system of inequalities graphed below?



 **A** (4, 0) **C** (6, -7)

 **B** (6, 1)  **D**  (7, - 2)

**16)**  Let *f* be function such that *f(x)* = 2*x* – 4 is defined

 on the domain 0 ≤ *x* ≤ 8.

 What is the range of this function ?

 **A**  0 ≤ y ≤ 8 **C** -4 ≤ y ≤ 12

 **B** -4 ≤ y ≤ **∞**  **D** **-∞** ≤ y ≤ **∞**

**17)** Which graph shows a line where each value

 of *y* is three more than twice x?



 **A** **C**



 **B** **D**

**18)** If the point (-1, 1) is on the line whose function is f(x) = 2x + *b*, what is the value of *b*?

 **A** 1 **C** 3

 **B** 2 **D** 0

**19)** An expression of the sixth degree is written with a leading coefficient of seven and a constant of five. Which expression is correctly written for these conditions?

**A** 6x5 +x4 + 7 **C** 6x7 – x5 + 5

 **B** 7x6 - 6x4 + 5 **D** 7x5 + 2x2 + 6

**20)** The table below shows the year and the number of households in a building that had high-speed broadband internet access.



For which interval of time was the average rate of change the *largest?*

 **A** 2002 - 2004 **C** 2004 -2006

 **B** 2003 - 2005 **D** 2005 -2007

**21)** During the 2010 season, football player Fitzpatrick’s earnings, *f* were 0.005 million dollars more than those of his teammate McGee’s earnings, *m*. The two players earned a total of 3.95 million dollars. Which system of equations could be used to determine the amount each player earned, in millions of dollars?

**A** *m* + *f* = 3.95 **C** *f* – 3.95 = *m*

 *m* + 0.005= *f* *m* + 0.005= *f*

**B** *m* – 3.95 = *f* **D** *m* + *f* = 3.95

 *f* + 0.005= *m f* + 0.005= *m*

**22)** The table below shows the average diameter of a pupil in a person’s eye as he or she grows older.

What is the average rate of change in millimeters per year, of a person’s pupil diameter from age 20 to age 50?

**A** 2.4 **C** -2.4

**B** 0.04 **D** -0.04

**23)** The table below shows the number of grams of carbohydrates, *x*, and the number of Calories, *y*, of six different foods.

Use your graphing calculator to determine *line of best fit* for this set of data?

**A** *y* = 15*x* **C** *y* = 0.1*x* – 0.4

 **B** *y* = 0.07*x* **D** *y* = 14.1*x* + 5.8

**24)** The Jamison family kept a log of the distance they traveled during a trip, as represented by the graph below.

During which interval was their average rate of speed the least?

**A** the 1st hour to the 2nd hour

**B** the 2nd hour to the 4th hour

**C** the 6th hour to the 8th hour

**D** the 8th hour to 10th hour

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **PART 2:**

**Directions:** All work must be shown to receive full credit.

**25)** What is the expression – 4x(x – 4) – 5x(x + 7) equivalent to in simplest form?

*Only algebraic solutions will receive full credit.*

**26)** What is the value of x in the equation ?

*Only algebraic solutions will receive full credit.*

**27)** What is the product of 4x2 - 7x + 10 and x + 6 in standard form?

*Only algebraic solutions will receive full credit.*

**28)** Solve the inequality below to determine and state the *smallest possible* value of *x* in the solution set. *Only algebraic solutions will receive full credit.*

4(x + 5) ≤ 6x – 8

**29)** Bob and Gary work at a flooring store.

* Bob is paid $185 per week plus 3% of his total sales in dollars, *x*, which can by represented by *g(x)* = 185 + 0.03*x.*
* Gary is paid $275 dollars per week plus 2.5% of his total sales in dollars, *x*, which can be represented by *f(x)* = 275 + 0.025*x.*
* Determine the value of *x*, in dollars, that will make their weekly pay the same.

 *Only algebraic solutions with receive full credit*.

What does *x* represent in the context of this situation?

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**30)** Let f(x) = –2x2 + 4 and g(x) = – 2x.

 On the set of axes below, draw the graphs of each function.

**Hint:** You can determine the (x.y) coordinates needed to graph both equations by placing the equations in you Y= and viewing the table values.

 Using the graph, determine and state *all* values of x for which *f(x) = g(x).*

Hint: f(x) and g(x) are the y values. You need to list the values of x, for which the y-values are the same on both graphs (in other words, the x values for the points of intersection.