Algebra One Packet
March 30th – April 3rd

Directions:

1. Complete ALL given assignments on the assigned day.
2. Ask questions if you need help or clarification. Call or Text (850) 404-9420 or Remind - @d8hs7hh to 81010. If I do not answer right away, I will get back to you very soon.
3. Remember you must show your work! EVERY TIME FOR EVERY PROBLEM! (No work means no credit)
4. These assignments will be graded.
5. You still must take the Algebra EOC to graduate high school, so keep up the hard work!
Section 3: Introduction to Functions

Which of the following statements about closure is false?

A) Polynomials are closed under addition. When you add polynomials, the result will always be a polynomial.

B) Polynomials are closed under subtraction. When you subtract polynomials, the result will always be a polynomial.

C) Polynomials are closed under division. When you divide polynomials, the result will always be a polynomial.

D) Polynomials are closed under multiplication. When you multiply polynomials, the result will always be a polynomial.

A company manufactures Handband, a wireless activity tracker. There are initial start-up costs involved. Additionally, the company spends a certain amount of money to manufacture each Handband. The cost of manufacturing $h$ Handbands is given by the function, $C(h) = 21h + 15000$. Which of the following statements are true? Check all that apply.

- If the initial start-up costs are not considered, the value 21 is the cost to make one headband.
- The value 15000 represents the average number of Handbands manufactured each year.
- The value 15000 represents the start-up cost.
- The function $C(h)$ represents the revenue the company receives from the sales of Handbands.
- The company spends $57,000 to manufacture 2000 Handbands.
- The company earns $21 profit for each Handband they sell.
Select the ordered pair that represents a solution to each function below.

\[ f(x) = -x^2 + 5 \]

Select a Value

\[ f(x) = x^2 + 5 \]

Select a Value

Select a Value

\[ f(x) = -x + 6 \]

Select a Value

Select a Value

\[ f(x) = x + 6 \]

Select a Value

Select a Value

\[ f(x) = x^3 - 9 \]

Select a Value

Select a Value

\[ f(x) = -x^3 - 9 \]

Select a Value
Which expression is equivalent to \((2x^5 + 7x^3) - (5x^2 - 4x^3)\) ?

A. \(-3x^3 + 11\)

B. \(-3x^3 + 3\)

C. \(2x^5 + 11x^3 - 5x^2\)

D. \(2x^5 - 3x^3 - 5x^2\)

Which of the following is equivalent to the polynomial expression below?

\((10g^3 - 8g^2 + 5g - 14) + (10g^2 + 12g)\)

A. \(10g^3 + 2g^2 + 17g - 14\)

B. \(10g^3 + 2g^2 + 12g - 14\)

C. \(20g^3 + 2g^2 + 17g - 14\)

D. \(20g^3 - 8g^2 + 17g - 14\)
Consider the table below that represents a function.

<table>
<thead>
<tr>
<th>Input</th>
<th>20</th>
<th>-6</th>
<th>-10</th>
<th>5</th>
<th>-2</th>
<th>-17</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>-2</td>
<td>7</td>
<td>-3</td>
<td>-3</td>
<td>12</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Which number(s) below can be placed in the empty cell so that the table continues to represent a function? Select all that apply.

- [ ] -17
- [ ] -8
- [ ] -2
- [ ] 2
- [ ] 5
- [ ] 8
- [ ] 15

If $M = 5x^2 + 7x - 4$ and $N = -3x^2 - 4x + 5$, then $M - N$ equals

A. $2x^2 + 3x + 1$
B. $2x^2 + 11x - 9$
C. $8x^2 + 3x + 1$
D. $8x^2 + 11x - 9$
Peter is driving from Pensacola to Jacksonville. The graph shows his distance from Jacksonville.

Peter's average speed is the fastest on interval:

A
B
C
D

Consider the list of operations below. Choose the one that polynomials are not closed under.

A Addition
B Subtraction
C Multiplication
D Division
Section 3: Introduction to Functions (Try 2)

Use the drop down menus below to identify whether the graphs below are functions.

Graph 1:

Select a Value

Select a Value

This graph is a function.

This graph is not a function.

It costs $6 per pound for peanuts at Blessed Food Market. Which of the following represents the range of the function in terms of cost per pound?

A $6
B Amount of Peanuts
C Cost of Peanuts Purchased
D Peanuts Purchased

is greater than $h(1)$.

is equal to $h(1)$

is less than $h(1)$.
A naval engineer uses the function, \( P \), to analyze the effects of water pressure on submarines. The function \( P(d) \) measures the pressure exerted by water, where \( d \) represents the depth of water in meters. Which of the following would be a possible domain?

A  \( d \) is the set of all integers.

B  \( d \) is the set of all integers where \( d > 0 \).

C  \( d \) is the set of all rational numbers.

D  \( d \) is the set of all rational numbers where \( 0 \leq d \leq \text{depth of sea floor} \).
Identify the domain and range of the function graphed below.

The domain is:

<table>
<thead>
<tr>
<th>Select a Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select a Value</td>
</tr>
<tr>
<td>$x \geq 4$</td>
</tr>
<tr>
<td>$x \leq 4$</td>
</tr>
<tr>
<td>$y \geq 0$</td>
</tr>
<tr>
<td>$y \leq 0$</td>
</tr>
<tr>
<td>$x \geq 0$</td>
</tr>
</tbody>
</table>
Consider the following table:

<table>
<thead>
<tr>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>7</td>
</tr>
<tr>
<td>-1</td>
<td>4</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

Does the table represent a function? Why or why not?

A. The table represents a function because each element in the range is associated with exactly one element in the domain.

B. The table does not represent a function because each element in the domain is associated with exactly one element in the range.

C. The table represents a function because each input has exactly one output.

D. The table does not represent a function because each output does not have exactly one input.

\[(x + y + 2)(y + 1)\]

\[\begin{array}{l}
A. \quad y^2 + 4xy + 2 \\
B. \quad xy + 4y + x + 2 \\
C. \quad y + x + y + 2 \\
D. \quad y^2 + xy + x + 3y + 2
\end{array}\]
One of the greatest assets of a secretary is often his/her ability on the keyboard of a computer. Mrs. Garcia has been recognized as the Most Outstanding Typist at a prestigious firm because of her outstanding typing speed. The table below displays data collected from her most recent evaluation.

<table>
<thead>
<tr>
<th>Minutes</th>
<th>Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>140</td>
</tr>
<tr>
<td>3</td>
<td>210</td>
</tr>
<tr>
<td>4</td>
<td>280</td>
</tr>
</tbody>
</table>

Write an equation to represent the total number of words, \( y \), that Mrs. Garcia can type in \( x \) minutes.

If Mrs. Garcia maintains a constant speed consistent with the results above, how many words will she type in 49 minutes?

Consider the following expression.

\[-2m(m + n - 4) + 5(-2m + 2n) + n(m + 4n - 5)\]

Which of the following is an equivalent expression?

- **A** \(-10m^2 + 4n^2 - mn - 2m + 5n\)
- **B** \(-10m^2 + 4n^2 - 3mn - 2m + 5n\)
- **C** \(-2m^2 + 4n^2 - mn - 2m + 5n\)
- **D** \(-2m^2 + 4n^2 - 3mn - 2m + 5n\)
A rectangular photograph is mounted on a square piece of cardboard whose sides have length $x$. The border that surrounds the photo is 3 inches on each side and 4 inches on both the top and bottom.

Which of the following expressions represents the area of the photograph? Check all that apply.

- $x^2$
- $(x + 8)(x + 6)$
- $(x - 8)(x - 6)$
- $x^2 + 48$
- $x^2 - 48$
- $x^2 + 14x + 48$
- $x^2 - 14x + 48$
Select the values for the domain and range of the functions graphed below.

**Graph 1**

Domain of Graph 1

- **Select a Value**
- **Select a Value**

- \( \{x \mid \text{all real numbers}\} \)

- \( \{y \mid \text{all real numbers}\} \)

- \( \{x \mid -1 \leq x \leq 5\} \)

- \( \{y \mid -1 \leq y \leq 2\} \)

- \( \{y \mid -1 \leq y \leq 5\} \)

- \( \{x \mid -1 \leq x \leq 2\} \)

**Graph 2**
Section 4: Linear Equations, Functions and Inequalities

You are playing an Algebra 1 board game with your friends in Mr. Harris’s class. It is your turn. You roll the dice and move your token to the next box in the board. You are in the Arithmetic Sequence section of the game. You pick a clue card and one of your partners asks you a question. In order to stay alive in the game, you need to answer correctly. You pick the card below.

The sixth term is 22 and the common difference is six.

The question your partner poses to you is “What is the fiftieth term?”

A 135
B 252
C 285
D 300
The system $Mx + Ny = P$ has the solution $(1,3)$, where $Rx + Sy = T$.

$M, N, P, R, S$ and $T$ are non-zero real numbers. Which of the following systems would not have $(1,3)$ as a solution?

A. $Mx + Ny = P$
   $7Rx + 7Sy = 7T$

B. $(M + R)x + (N + S)y = P + T$
   $Rx + Sy = T$

C. $Mx + Ny = P$
   $(2M - R)x + (2N - S)y = P - 2T$

D. $\frac{M}{2} x + \frac{N}{2} y = \frac{P}{2}$
   $Rx + Sy = T$
Consider the graph of the linear equation $2x - 5y = 10$.

The $x$-intercept is

<table>
<thead>
<tr>
<th>Select a Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select a Value</td>
</tr>
<tr>
<td>-2</td>
</tr>
<tr>
<td>-5</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

Earyn owns French Twist Hair Salon. She charges $35 for a cut and $120 for a cut and color combo. Yesterday, she had seven clients and earned $500. Let $x$ represent the number of clients who only got a cut and $y$ represent the number of clients who got a cut and color combo.

Which of the following equations could be used to represent the situation? Check all that apply.

- $y = 7 - x$
- $x + y = 500$
- $120x + 35y = 500$
- $(35 + 120)(x + y) = 500$
- $35x + 120y = 500$
Identify the values that create ordered pairs that are solutions to the equation $3x - 5y = 20$.

$(5, y_1)$ and $(x_2, 2)$

Consider the following system of equations:

\[ 2x + 3y = 45 \]
\[ x + y = 10 \]

What is the $x$-value of the solution for this system?

$x =$
The diagram below represents the first three terms of a sequence:

Term 1  Term 2  Term 3

Assuming the pattern continues, which formula determines $a_n$, the number of squares in the $n$th term?

(A) $a_n = 3n + 4$
(B) $a_n = 3n + 1$
(C) $a_n = 3n + 3$
(D) $a_n = 3n + 2$
At a candy store, Erika bought 3 kilograms of cinnamon red hots and 1 kilogram of gummy bears for $21.00. Meanwhile, Irene bought 3 kilograms of cinnamon red hots and 3 kilograms of gummy bears for $39.00. What is the cost of one kilogram of each type of candy?

Red hots: 

Gummy bears: 

\[
\begin{array}{cccc}
1 & 2 & 3 & \text{Clear} \\
4 & 5 & 6 & + \\
7 & 8 & 9 & - \\
0 & \text{.} & \text{-} & \times \\
\end{array}
\]

\[
\begin{array}{cccc}
< & \leq & = & \geq \\
\pi & \approx & \infty & (,) \\
\int & \int & () & \text{\sqrt{}} \\
\parallel & \sqrt{x} & \text{\sqrt{x}} & \\
\end{array}
\]

Which of the following points is a solution to the system of inequalities?

\[
\begin{align*}
6x - 2y &< 10 \\
6x + 3y &\geq 15
\end{align*}
\]

A \quad (1,2)

B \quad (3,3)

C \quad (0,5)

D \quad (2,1)
Lance lived in Portugal and Brazil for a total of 14 months to learn Portuguese. He learned an average of 130 new words per month when he lived in Portugal, and an average of 150 new words per month when he lived in Brazil. In total, he learned 1920 new words.

Write a system of equations to represent this situation. Use \( x \) to represent Portugal, and \( y \) to represent Brazil.

Equation 1: 

Equation 2:
To function properly, a rainwater outflow pipe must drop exactly 1 inch for every 25 inches of horizontal distance. A 40 feet long rainwater pipe runs under the edge of a roof. What is the vertical distance, in inches, the pipe must drop between its ends? Round your answer to the nearest tenth.

The following table shows the number of hours a cleaning company spends cleaning apartments.

<table>
<thead>
<tr>
<th>Time (hours)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartments Cleaned</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>

The relationship is linear.
The graphs of \( y = f(x) \) and \( y = g(x) \) are shown on the coordinate plane below.

If \( g(x) = k \cdot f(x) \), what is the value of \( k \)?

\[ k = \]

A student government organization is selling Christmas trees as a fundraiser. On Friday, they sold 5 noble fir trees and 3 douglas fir trees for a total of $420. On Saturday, 12 noble fir trees and 9 douglas fir trees were sold for a total of $1,680. What is the cost per tree for each type?

Cost of Noble Fir tree (in dollars) 

Cost of Douglas Fir tree (in dollars)
Which of the following equations can represent the function graphed below? Select all the possible equations.

- \( m = 250 - 25w \)
- \( m = 250 + 25w \)
- \( m = 250w \)
- \( m + 25w = 250 \)
- \( m - 25w = 250 \)
- \( 250m + 25w = 10 \)
At an airport, it costs $7 to park for up to one hour and $5 per hour for each additional hour. Let $x$ represent the number of hours parked. Write the function that models the cost, $C(x)$, of parking $x$ hours, where $x$ is an integer greater than 1.

(A) $C(x) = 5x + 12$

(B) $C(x) = 5(x + 1) + 7$

(C) $C(x) = 5(x - 1) + 7$

(D) $C(x) = 5x + 7$

The population of a city in 2005 was 15,000. By 2010, the city's population had grown to 32,800. If the population growth follows a linear model, what is the projected population for 2015?
Students in Miss Moseley’s fourth grade class are learning multiplication, and they demonstrate mastery by passing assessments. Travis has passed 11 tests, and his classmate, Jenifer, has passed 2 tests. Going forward, Travis plans to pass 2 tests per week. Meanwhile, Jenifer plans to pass 5 tests per week. Eventually Jenifer will catch up to Travis. When the number of tests each student has passed are equal, how many tests will each student have passed and how many weeks will it take?

Number of tests:

Number of weeks:

The graph of a linear equation contains the points (4,1) and (-2,-11). Which point also lies on the graph?

A. (1,1)
B. (1,-5)
C. (1,-2)
D. (1,-7)
Beverages Inc. sells espresso for $8.50 per pound and roasted coffee for $10.25 per pound. The following equations represent a recent online purchase.

\[ x + y = 5 \]
\[ 8.5x + 10.25y = 46 \]

Which of the following is true of the purchase?

(A) The variable \( x \) represents the pounds of roasted coffee in the $46 purchase.

(B) The variable \( y \) represents the pounds of roasted coffee in the $46 purchase.

(C) The consumer spent $46 and purchased 5 pounds of espresso.

(D) The consumer spent $46 and purchased 5 pounds of roasted coffee.
Friday April 3rd 2020
Study Island EOC Review

1. Which of the following shows that the quotient of two irrational numbers can be rational?
   - A. \( \pi \div \sqrt{5}\pi \)
   - B. \( \sqrt{3}\pi \div \frac{\pi}{3} \)
   - C. \( \frac{\sqrt{5}}{3} \div \sqrt{5} \)
   - D. \( \sqrt{3} \div \sqrt{5} \)

2. Which of the following describes the number below?
   \[ 10 \frac{8}{9} \]
   - A. Neither Rational nor Irrational
   - B. Both Rational and Irrational
   - C. Irrational Only
   - D. Rational Only

3. Which of the following correctly describes the sum below?
   \[ \frac{5}{6} + \sqrt{2} \]
   - A. both rational and irrational
   - B. neither rational nor irrational
   - C. rational
   - D. irrational
4. Which of the following describes the number below?
\[ \frac{9}{4} \]

- A. Neither Rational nor Irrational
- B. Rational Only
- C. Both Rational and Irrational
- D. Irrational Only

5. Which of the following describes the number below?
\[ \pi \approx 3.14159265358979323846... \]

- A. Both Rational and Irrational
- B. Neither Rational nor Irrational
- C. Rational Only
- D. Irrational Only

1. While taking an online pretest for an algebra class, the distance formula was displayed as shown below.

\[ d = (x_2 - x_1)^2 + (y_2 - y_1)^2 \]

Even though Logan had never seen the formula before, he knew the formula had rendered incorrectly. How did he know there was an error?

- A. The calculated distance would be in square units instead of linear units.
- B. The calculated distance would be in square units instead of cubic units.
- C. The calculated distance would be in cubic units instead of square units.
- D. The calculated distance would be in linear units instead of square units.
2. Rick serves his community as a firefighter. He works for a full 24 hours and then is off for the next 48 hours before his next 24-hour shift. Last month, he earned $4,697.28, before taxes, and worked twelve 24-hour shifts. How much money does Rick make per hour?

- A. $24.47
- B. $16.31
- C. $195.72
- D. $8.16

3. Based on the number of claims filed, a homeowners insurance company periodically reevaluates its premiums. It will either increase or decrease its premiums for all customers. Which measure provides the best information for its reevaluation?

- A. claims per sub-division
- B. claims per year per city
- C. claims per year
- D. claims per dollar value of property

4. Amy measured the length of an eraser. She discovered that her accuracy in her measurement was off by 0.005 centimeter. Which of the following could be the measured length of the eraser?

- A. 36.55 millimeters
- B. 365 millimeters
- C. 36.5 millimeters
- D. 36 millimeters
5. The time, in \( T \) seconds, it takes for one complete swing of a pendulum is represented by the equation below, where \( L \) is the length of the pendulum in meters, and \( g \) is the acceleration due to gravity (9.81 m/s\(^2\)).

\[
T = 2\pi\sqrt{\frac{L}{g}}
\]

What is the approximate length of the pendulum if it takes the pendulum 4.1 seconds to complete one full swing? (Use \( \pi = 3.14 \))

\( \text{A.} \) 0.04 m  
\( \text{B.} \) 22.96 m  
\( \text{C.} \) 6.38 m  
\( \text{D.} \) 4.14 m

1. Tyrone is taking a typing class. The graphs below show the results of his last test.

Which of the graphs above best shows the results of Tyrone's last test?

\( \text{A.} \) R  
\( \text{B.} \) S  
\( \text{C.} \) Q  
\( \text{D.} \) T
2. What is the approximate percentage of December's total sales that skateboards accounted for?

- A. 16%
- B. 32%
- C. 68%
- D. 51%

3. Tom and Holly are spending some time in Europe.

Which graph best shows how many days Tom and Holly spent in each city?

- A. S
- B. Q
- C. T
- D. R
4. The graph below shows the relationship between a male's weight and the distance he can throw a football.

![Graph showing the relationship between weight and distance thrown.]

Based on the graph, which is a likely distance that a 285-pound male can throw a football?

- A. 31 yards
- B. 23 yards
- C. 38 yards
- D. 42 yards
5. The graph below shows the relationship between a male’s weight and the distance he can throw a football.

Which of the following is an invalid conclusion based on the graph?

- **A.** As a male’s weight increases, the distance he can throw a football first increases, and then decreases.

- **B.** As a male’s weight increases, the distance he can throw a football increases.

- **C.** There is a negative correlation between the data from 210 pounds to 360 pounds.

- **D.** There is a positive correlation between the data from 60 pounds to 210 pounds.
1. Which of the following interpretations for the given expression is correct?

\[ 5^{(3m + 12)} + 8n \]

- **A.** The sum of 8n and 5, raised to the power of 3m + 12.
- **B.** The sum of 5 raised to the power of 3m, 12, and 8n.
- **C.** The sum of 5 raised to the power of 3m + 12 and 8n.
- **D.** The sum of the quotient of 3m + 12 and 5 and 8n.

2. Brenda is opening a savings account which compounds interest quarterly. Her banker gave her the following expression to find the amount that will be in the account, in dollars, after \( t \) years.

\[ 4,700(1.03)^{4t} \]

Which statement below best describes the base, 1.03?

- **A.** the rate at which the account is increasing
- **B.** the number of times the account has compounded since it was opened
- **C.** the amount of the initial deposit
- **D.** the amount of the yearly earnings

3. The length, width, and height of a rectangular prism is \( a \), \((a - 9)\), and \((a + 9)\), respectively.

Which statement best describes \((a - 9)\)?

- **A.** The length of the rectangular prism is 9 units less than the width.
- **B.** The width of the rectangular prism is 9 units less than the length.
- **C.** The width of the rectangular prism is 9 units less than the height.
- **D.** The height of the rectangular prism is 9 units more than the length.
4. At the convenience store, magazines cost $x$ dollars each, sodas cost $y$ dollars each, and candy bars cost $z$ dollars each. The amount of money Martha had left after purchasing items from the convenience store is represented by the following expression.  \[ \$22.61 - (ay + bx) \]

Which of the following is the best interpretation of $a$?

- **A.** The number of candy bars Martha purchased at the convenience store.
- **B.** The number of sodas Martha purchased at the convenience store.
- **C.** The number of magazines Martha purchased at the convenience store.
- **D.** The number of sodas and magazines Martha purchased at the convenience store.

5. The Smith family has three vehicles. Jeff fills up his vehicle for $x$ dollars a gallon. Valerie also fills up her vehicle for $x$ dollars a gallon. Megan fills up her vehicle for $y$ dollars a gallon. The expression below represents the total cost of the Smith family filling up all of their vehicles with gasoline. \[ ay + bx \]

What is the best interpretation of $bx$ in the above expression?

- **A.** The total amount it costs Jeff and Valerie to fill up their vehicles.
- **B.** The total amount it costs Valerie to fill up her vehicle.
- **C.** The total amount it costs Jeff and Megan to fill up their vehicles.
- **D.** The total amount it costs Megan to fill up her vehicle.

1. Which of the following interpretations for the given expression is correct?

   \[ x^2 + 8x + 3 \]

- **A.** The square of the sum of $x$, $8x$, and $3$.
- **B.** The sum of $x^2$, $8x$, and $3$.
- **C.** The sum of the square of $x + 8$ and $3$.
- **D.** The product of $x$ and the sum of $x$, $8$, and $3$.
2. Which of the following interpretations for the given expression is correct?

\[(x - 6)^{\frac{1}{3}} + 3\]

- **A.** The difference of \(x\) and the cube root of \(6 + 3\).
- **B.** The difference of the cube root of \(x - 6\) and 3.
- **C.** The sum of \(x\) and the cube root of \(6 + 3\).
- **D.** The sum of the cube root of \(x - 6\) and 3.

3. Which of the following interpretations for the given expression is correct?

\[(x + 8)^2 - 5\]

- **A.** The difference of the square of \(x\) and \(8 - 5\).
- **B.** The sum of the square of \(x\) and \(8 - 5\).
- **C.** The sum of the square of \(x\), 8, and \(-5\).
- **D.** The difference of the square of \(x + 8\) and 5.

4. A system is used to level out percentages. The new percentage, \(N\), in relationship to the old percentage, \(p\), is calculated by the equation below.

\[N = 9.64^{\frac{1}{2}}\]

What is the best interpretation of the equation?

The new percentage is the product of 9.64 and \(\text{th1}\). Which of the following interpretations for the given expression is correct?

- **A.** \(x^2 + 8x + 3\)
A. The square of the sum of $x$, $8x$, and 3.

B. The sum of $x^2$, $8x$, and 3.

C. The sum of the square of $x + 8$ and 3.

D. The product of $x$ and the sum of $x$, 8, and 3.

2. Which of the following interpretations for the given expression is correct?

$$(x - 6)^{\frac{1}{3}} + 3$$

A. The difference of $x$ and the cube root of $6 + 3$.

B. The difference of the cube root of $x - 6$ and 3.

C. The sum of $x$ and the cube root of $6 + 3$.

D. The sum of the cube root of $x - 6$ and 3.

3. Which of the following interpretations for the given expression is correct?

$$(x + 8)^2 - 5$$

A. The difference of the square of $x$ and 8 - 5.

B. The sum of the square of $x$ and 8 - 5.

C. The sum of the square of $x$, 8, and -5.

D. The difference of the square of $x + 8$ and 5.
4. A system is used to level out percentages. The new percentage, \( N \), in relationship to the old percentage, \( p \), is calculated by the equation below.

\[
N = 9.64 \sqrt[2]{p^2}
\]

What is the best interpretation of the equation?

- **A.** The new percentage is the product of 9.64 and the square root of the old percentage.
- **B.** The new percentage is the product of 9.64 and the old percentage squared.
- **C.** The new percentage is the square root of the product of 9.64 and the old percentage.
- **D.** The new percentage is the product of 9.64 and half of the old percentage.

5. Which of the following interpretations for the given expression is correct?

\[
3(x + 7)^2
\]

- **A.** The quotient of 3 and the square of \( x + 7 \).
- **B.** The product of 3 and the square of \( x + 7 \).
- **C.** The product of 3 and the sum of \( x \) and 7 squared.
- **D.** The sum of 3, \( x \), and 7 squared.