NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HOUR\_\_\_\_\_\_

**Unit 4- Algebra End of Unit REVIEW**

(NOTE: The problems on this review are DIFFERENT but similar than the actual test)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Question 1**

|  |  |
| --- | --- |
| Student | Response |
| Sophie | 33 = 9 |
| Kylie | 25 = 32 |
| Oliver | 43 = 84 |
| Landon | 92 = 81 |

Which students answered incorrectly?  Why are they wrong? | **Question 2****Two situations are shown below: 1.**Charlie has 5 times as many baseball cards as Ramon. If Ramon has ***x*** number of baseball cards, how many does Charlie have? **2.  Emily has 5 more bracelets than Amy.  If Amy has x** **number of bracelets, how many does Emily have?****Are these situations represented by the same****expression?  Explain why or why not.** |
| **Question 3****A** **field** **is** **shown** **below.** https://imagebank.illuminateed.com/imagebank/448733 **Ricardo writes the expression 5(2) +5(7) to** express the area of the field. Write a different, but equivalent expression to represent the area of the field. **What** **is** **the** **area** **of** **the** **field?** | **Question 4**Select *all* equations that have *d* = 10 as a solution.

|  |  |
| --- | --- |
| A | *d* + 3 = 8 |
| B | 4 + *d* = 14 |
| C | 6 × *d* = 60 |
| D | 2*d* = 7 |

 |
| **Question 5****What value of x makes this equation true? x + 17 = 20** | **Question 6** **What value of y makes this true? 4y = 16** |
| **Question 7****What values of x makes this true? 40 > 10 + x** | **Question 8**The sum of *q* plus *r* equals 45.  If *q* = 15, which equationcan be used to find the value of *r*?

|  |  |  |
| --- | --- | --- |
| A | 15 = *r* – 45 |  |
| B | *15* – *r* = 45 |  |
| C | *r* – 15 = 45 |  |
| D | 15 + *r* = 45 |  |

 |
| **Question 9**https://imagebank.illuminateed.com/imagebank/368949 Which equation is shown in the table above?

|  |  |  |
| --- | --- | --- |
| A | *z* = *x* – 6 |  |
| B | *z* = *x* • 6 |  |
| C | *z* = *x* ÷ 6 |  |
| D | *z* = *x* + 6 |  |

 | **Question 10**Mrs. Quimby was looking for books at the library. She decided to check out 4 books from each shelf in the children's section. Which expression below can represent the total number of books Mrs. Quimby checked out if there are *v* number of shelves in the children's section?

|  |  |
| --- | --- |
| A | *v* + 4 |
| B | 4 – *v* |
| C | *v* × 4 |
| D | 4 ÷ *v* |

 |
| **Question 11****Kylie went on a hike with her family yesterday afternoon.  They first hiked to a creek, which took them 30 minutes.  Then they hiked to a picnic spot.  Enter an expression showing the total number of minutes they hiked if it took them m number of minutes to hike from the creek to the picnic spot.** | **Question 12****Pedro and his friend Zach are running a race together.  They each run a lap around the track, and then add their times together for a total score.  Pedro ran first with a time of 5.8 minutes.  After Zach ran, they found that their total time was 10.2 minutes. Part A: If z = Zach's time, write an equation that shows the boys' total time together.****Part B: Using the equation you wrote for Part A, what was Zach's time?** |
| **Question 13****Enter the value of *k that makes the given* equation**true**. k + 64.09 = 71.8** | **Question 14**Thomas is saving money for a new mountain bike.  The amount (*a*) Thomas needs to save is more than $60.89. Which inequality models the amount Thomas needs to save?

|  |  |  |
| --- | --- | --- |
| A | $60.89 = *a* |  |
| B | $60.89 < *a* |  |
| C | *a* > $60.89 |  |
| D | *a* < $60.89 |  |

 |
| **Question 15**Select the number line that represents all solution of *X*>13.5.

|  |  |  |
| --- | --- | --- |
| A | https://imagebank.illuminateed.com/imagebank/844056 |  |
| B | https://imagebank.illuminateed.com/imagebank/844057 |  |
| C | https://imagebank.illuminateed.com/imagebank/844058 |  |
| D | https://imagebank.illuminateed.com/imagebank/844059 |  |

 | **Question 16**Sam gets paid a set rate in his allowance for making his bed every morning. His rate is $0.75 earned for every morning he makes his bed. Let *n* represent the number of days Sam makes his bed.Let *t* represent the total amount earned, in dollars. Draw a graph to show how much he earned over the course of 7 days. |
| **Question 17**Carlos has observed that the number of tadpoles in the pond in his backyard is increasing at a steady rate each day. * Let *d* represent the number of days Carlos observes his pond.
* Let *t* represent the total number of tadpoles Carlos observes each day.

Fill in the table for all missing values of *d* and *t*.

|  |  |
| --- | --- |
| **Number of days *d*** | **Number of tadpoles *t*** |
| 1 |  |
| 2 | 12 |
|  | 24 |
| 5 | 30 |
| 6 |  |

 | **Question 18**Which of the following expressions contains exactly **four** terms?

|  |  |  |
| --- | --- | --- |
|  | A | *x* + 5*yz* |
|  | B | 9 + 8*x* + 4*y* |
|  | C | 2 + 4*wx* – 3*y* + 13*z* |
|  | D | *x* + 7*y* |

 |
| **Question 19**If *d* = 7, what is 2 × (7 + *d*)?

|  |  |  |
| --- | --- | --- |
|  | A | 15 |
|  | B | 20 |
|  | C | 28 |
|  | D | 84 |

 | **Question 20**Which of these expressions is equivalent to *z* + *z* + *z* + *z*?

|  |  |  |
| --- | --- | --- |
|  | A | 4 + *z* |
|  | B | 4 + *z*4 |
|  | C | 4*z* |
|  | D | 4*z*4 |

 |
| **Question 21**Which of the following statements are true?  Select ***two*** that apply.

|  |  |  |
| --- | --- | --- |
|  | A | *q* × *q* × 74 = 74*q*2 |
|  | B | *c* + *c* + *c* + 59 = 3*c* + 59 |
|  | C | *a* + *a* + 103 = 103(2*a*) |
|  | D | *i* – *i* + 82 = 2*i* + 82 |

 |