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

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

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| **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](https://testing.illuminateed.com/#ib_img_0)   **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 equation  can 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](https://testing.illuminateed.com/#ib_img_0)  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](https://testing.illuminateed.com/#ib_img_0) |  | | B | [https://imagebank.illuminateed.com/imagebank/844057](https://testing.illuminateed.com/#ib_img_1) |  | | C | [https://imagebank.illuminateed.com/imagebank/844058](https://testing.illuminateed.com/#ib_img_2) |  | | D | [https://imagebank.illuminateed.com/imagebank/844059](https://testing.illuminateed.com/#ib_img_3) |  | | **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 | | |