**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date Due: \_\_\_,\_\_,\_\_\_\_**

**Common Core Algebra Regents Review #3**

***Directions:*** *Choose the best answer.  Answer ALL questions. Show ALL work in column 2.* ***If there is no mathematical work to be shown, write an explanation or definition to support your answer!*** *This counts as a quiz grade!!!*

|  |  |
| --- | --- |
| 1. A prom ticket at Smith High School is $120. Tom is going to save money for the ticket by walking his neighbor’s dog for $15 per week. If Tom already has saved $22, what is the minimum number of weeks Tom must walk the dog to earn enough to pay for the prom ticket?

 [1]  6 weeks    [2]  7 weeks  [3]  8 weeks      [4]  10 weeks | Must write an inequality |
| 1. The number  is between

 [1]  1 and 3 [2]  4 and 5  [3]  8 and 10 [4]  17 and 19  | work |
| 4. If , which of the following must be true? [1]  [2]      [3]   [4]   | Literal equation ( solve for x and check; solve for y then check) |
| 5. Which of the following equations has a y-intercept of -3?[1]  [2] 27 + 3 y = 6x[3] 6y + x = 18[4] y + 3 = 6x  | Slope – y intercept form |
| 6. Solve for   [1]  [2]    [3]   [4]   | Work |
| 7. Let  be an odd positive number. What is the solution set of ? [1] {1,3}    [2]  {-3,-1,1,3}    [3]  {1,3,4}      [4]  {0,1,3}  | Graph first |
| 8. Which is the correct verbal expression for the mathematical expression 5 - 2*x* ?[1] Five less than two times a number. [2] Two times a number less than five. [3] Five more than twice a number. [4] Five times two plus some number.  | Explain |
| 9. Simplify the following expression:q3924[1] 6*x*7*y*4 [2] 36*x*7*y*4 [3] 36*x*5*y*4 [4] 12*x*7*y*4  | Exponent laws |

|  |  |
| --- | --- |
| 1. Mr. Goldberg asked his son to give an example that illustrates the distributive law. Which of the following equations can his son use to demonstrate the distributive law?

 [1]  [2]       [3]    [4]   | No work! No credit! |
| 11. What is the solution of the following system of equations?2*a* + 3*b* = 12*a* = 1 half*b* - 61. *a* = -6 and *b* = 0
2. *a* = -4.5 and *b* = 3
3. *a* = -3 and *b* = 6
4. *a* = 24 and *b* = 6
 |  |
| 12. The inequality $7-\frac{2}{3}x<x-8$ is equivalent to:[1] $x > 9$ [2] $x > \frac{-3}{5}$[3] $x<9 $ [4] $ x< \frac{-3}{5}$ | No work! No credit! |
| 13.Which inequality is shown in the graph below?1. *y* ≤ 4 thirds*x* + 3
2. *y* ≥ 4 thirds*x* + 3
3. *y* ≤ 4 thirds*x* - 4
4. *y* ≥ 4 thirds*x* – 4
 | https://www.castlelearning.com/Review/Courses/integratedalgebra/q-136594.gif?v=20151107090822 |
| 14. The graph of the equation *y* = -2 is a line1. parallel to the *x*-axis
2. parallel to the *y*-axis
3. passing through the origin
4. passing through the point (-2,0)
 |  |
| 15.The value of the *y*-intercept for the graph of 4*x* – 5*y* = 40 is |  |
| 16. If A = 4*x*2 – 3*x* + 6 and B = –7*x*2 + 3*x* + 6, find A – B in standard form. |  |
| 17. Determine the smallest integer that makes −3*x* + 7 −​ 5*x* < 15 true. |  |
| 18. The value of the *x*-intercept for the graph of 4*x* – 5*y* = 40 is1. 10
2. 4 fifths
3. -4 fifths
4. -8
 |  |
| 1. Perform the indicated operations and express as a trinomial:  (*x* + 4)(*x* – 2) + 3*x*
2. *x*2 + 2*x* – 8
3. *x*2 + 2*x* + 8
4. 5*x* – 2
5. *x*2 + 5*x* – 8
 |  |
| 1. Which value of *x* is a solution of the

inequality 25*x* – 100 < 250?1. 13
2. 14
3. 15
4. 16
 |  |
| 21) Alexandra purchases two doughnuts and three cookies at a doughnut shop and is charged $3.30. Briana purchases five doughnuts and two cookies at the same shop for $4.95. All the doughnuts have the same price and all the cookies have the same price. Find the cost of one doughnut and the cost of one cookie. |  |
| 22) Which point is in the solution set of the following system of inequalities?*y* < 2*x* + 1*y* ≥ –http://www.castlelearning.com/review/Courses/integratedalgebra/1-3.gif?v=20060518053250*x* + 41. (5, 0) 2. (−2, 1)

(6, 6) 4. (1, 9) |  |