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

**Common Core Algebra Regents Review #2**

***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!!!***

***Note: please take your time and do it Right this time.***

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| --- | --- |
| 1. The expression (3*c -* 3*d*) - (*c* - 3*d*) when simplified is

[1]  2*c*-6*d*    [2]  2*c*     [3]  4*c -* 6*d*     [4]  4*c* | Work here: |
| 1. What is the product of (3*x* – 7*)* and

(4*x* – 3), in standard form?What is the leading coefficient?  | Work here: |
| 1. What is the result when 6*x*2 – 13*x* + 12 is subtracted from –3*x*2 + 6*x* + 7?
2. 3*x*2 – 7*x* + 19
3. 9*x*2 – 19*x* + 5
4. 9*x*2 – 7*x* + 19
5. –9*x*2 + 19*x* – 5
 | Work here: |
| 1. Express the product in standard form:

(*x* + 4)2 = [1] *x*2 + 16  [2]  *x*2 + 4*x* + 16   [3]  *x*2 + 8*x* + 16 [4]  *x*2 + 4*x* + 8  | Work here: |
| 1. Solve and graph on a number line

 2*x* - 5 > *x* – 2. Explain what your solution means.  [1]  *x* < 3   [2]  *x* > 3    [3]  *x <* -5   [4]  *x* > -2  | Work here: |
| 1. Solve for x:   0.7*x* + 2(*x* - 3) = 0.2*x* + 3
 | Work here: |
| 1. **Given  *y* = 3*x,*  evaluate *y* when *x* = 3.**

 [1] 3       [2]  9     [3]  27    [4]  81 | Explain: |
| Graph y - x = 5 on the axes below.Which of the following points is in the solution set?1. (9, 0)
2. (-3, 6)
3. (0, 5)
4. (7, 8)
 |  |
| 9.A cell phone company charges $60.00 a month for up to 1 gigabyte of data. The cost of additional data is $0.05 per megabyte. If *d* represents the number of additional megabytes used and *c* represents the total charges at the end of the month, which linear equation can be used to determine a user's monthly bill?

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

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| 10.If *x* is an integer, which is the solution set of –1 ≤ *x* < 2?1. {0, 1}
2. {–1, 0, 1, 2}
3. {0, 1, 2}
4. {–1, 0, 1}
 | Work here: |
| 11.Which statement is true about the line that passes through the points (9, 2) and (9, -4)?[1] Its slope is 9. [2] Its slope is q4038-2. [3] Its slope is 0.  [4] Its slope is undefined | Work here: |
| 12. The graph below represents a jogger’s speed during her 20-minute jog around her neighborhood.Which statement best describes what the jogger was doing during the 9–12 minute interval of her jog?1. She was standing still.
2. She was increasing her speed.
3. She was decreasing her speed.
4. She was jogging at a constant rate
 | https://www.castlelearning.com/Review/Courses/math/q-135809.gif?v=20150827095502Work here: |
| 13. Four students are playing a math game at home. One of the math game questions asked them to write an algebraic equation.Which student wrote an algebraic equation?1. Brandon
2. William
3. Alice
4. Kayla
 | Brandon wrote: 3(5*x* − 0)William wrote: 7 < 2(6 + *x*)Alice wrote: 15*x*Kayla wrote: 11 = 2*x* + 3 |
| 14. Solve the compound inequality algebraically and graph the solution set on the number line. 5(x + 7) < 15 or 7 – 2*x* < *x* – 8  |  |
| 15. The table shows the weight, in pounds, of flour *x* that a pizza maker uses for *y* dough balls.If the pattern continues, how many pounds of flour *x* does the baker need to use for 220 dough balls?1. 50 pounds
2. 80 pounds
3. 100 pounds
4. 484 pounds
 |

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| --- | --- | --- | --- | --- |
| ***x* (pounds)** | 10 | 20 | 30 | 40 |
| ***y* (dough balls)** | 22 | 44 | 66 | 88 |

Work here: |
| 16. If , then  equals[1]       [2]     [3]        [4]   | Work here: |
| 17) Byron has 72 coins in his piggy bank. The piggy bank contains only dimes and quarters. If he has $14.70 in his piggy bank, which equation can be used to determine *q*, the number of quarters he has?1. 14.70 + 0.25*q* = 72
2. 0.10(*q –* 72) + 0.25*q* = 14.70
3. 0.10(72 – *q*) + 0.25*q* = 14.70
4. 0.10*q* + 0.25(72 – *q*) = 14.70
 | Work here: |
| 18. Three times the sum of a number and four is equal to five times the number, decreased by two. If *x* represents the number, which equation is a correct translation of the statement?1. 3(*x* + 4) = 5*x* - 2
2. 3(*x* + 4) = 5(*x* - 2)
3. 3*x* + 4 = 5*x* - 2
4. 3*x* + 4 = 5(*x* - 2)
 | Explain: |
| 19. Three consecutive even integers are such that the sum of the smallest and 3 times the second is 38 more than twice the third. Find the integers. |  |
| **20.**Write an appropriate compound inequality to represent the following solution set. Express the solution in interval notation:a.  b.   |  Bonus:  |
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