MAT1033C Intermediate Algebra Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please time yourself, take this quiz and write a self-reflection essay using the space provided below.

Starting time:\_\_\_\_\_\_\_\_\_

Ending time:\_\_\_\_\_\_\_\_\_\_

Total time spent:\_\_\_\_\_\_\_\_\_minutes

Diagnostic Quiz 1 Quiz 2 Topics Weakness Strength Solution

1 1 1

2 2 2

3 3 3

4 4 4

5 5 5

6 6 6

7 7 7

8 8 8

9 9 9

10 10 10

 11

 12

 13

 14

 15

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**Student Signature Date**

**Quiz 1**

1. Simplify the expression: −4[-5 -3(−4 + 9)] - 15

|  |  |  |
| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

2. Simplify the arithmetic expression: $\frac{1}{15 }+\frac{7}{20}$

|  |  |  |
| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

3. Solve the equation: 7( -4 𝑥 + 1) = −2(3𝑥 − 4) +3 𝑥

|  |  |  |
| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

4. Evaluate the expression 𝑥2 − 3𝑦𝑧 + 3(𝑥 + 𝑦) for 𝑥 = −2, y = - 3, 𝑧 = −1.

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| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

5. Simplify the polynomial: (3𝑥2 +2 x - 5)(2𝑥 − 6) − (2𝑥)(5𝑥2 +3𝑥 − 4)

|  |  |  |
| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

6. A television is on sale for $560. If the sale price is 20% less than the regular price, what was the regular price?

|  |  |  |
| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

7. Solve the equation for y: $12x + \frac{5}{6}y - 10 = 4 +2 x $

|  |  |  |
| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

8. Factor the trinomial: $2x^{2} - 7x + 6$

|  |  |  |
| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

9. Find the x- and y-intercept of the linear equation 5𝑥 − 3𝑦 = −30, and write your answers as ordered pairs.

|  |  |  |
| --- | --- | --- |
|  | Solve | Note to yourself |
|  |  |  |

10. Graph the line with a slope of $-\frac{2}{5}$ and the y-intercept at (0,4), and write the equation of this line in slope-intercept form.

|  |  |  |
| --- | --- | --- |
|  |  | Note yourself |
|  |  |  |

11. Graph 3x - 4y=12

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12. $y=x^{2}-4$



13. $y= -2$



14. If $4000 is deposited into an account earning *simple interest* at an annual interest rate of 4.5% for 3 years, how

much interest was earned?

15. If $5000 is deposited into an account earning compound interest at an annual interest rate of 6% for 5 years,

and it is compounded quarterly (thus 4 times per year), how much money is in the account at the end of the 5

years

16. Sophia would like to go on a vacation in 5 years and she expects her total costs to be $8000. If she invests $5700

into a savings account for those 5 years at 4.5% interest, compounding semi-annually, will she be able to go on

vacation?

17. Find the domain and range and determine whether the following relationships are functions

{(2,3) (4,3) (6,3)} Domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Rang:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Function: Yes No

 Y=2x-4 Domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Rang:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Function: Yes No

$y=\sqrt{x-3}$ Domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Rang:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Function: Yes No

18. Identify whether each graph is a function