

Name: _____ Class: _____ Date: _____

ID: A

Algebra EOC Practice Test #2

Multiple Choice

Identify the choice that best completes the statement or answers the question.

_____ 1. Which of the following lines is perpendicular to the line $y = -2$?

solved to show the number of chairs c she can buy? \$10. If she has \$50, which inequality can be

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_____ 5. Multiply $(x + 7)(x - 7)$.

a. $x^2 - 49$

c. $2x - 14$

b. $x^2 + 14x - 49$

d. $x^2 + 49$

_____ 6. Factor $x^2 - 16$.

a. $(x - 4)^2$

c. $(x + 4)^2$

b. $(x + 4)(x - 4)$

d. cannot be factored

_____ 7. Factor $16y^2 + 12y$ completely.

a. $y($

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_____ 9. Which of the following graphs shows the graph of this equation?
 $y + 1 = 2$

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_____ 10. The city of Plantation plans to build a new community park with a public swimming pool. The

- _____ 11. A family is on vacation in Key West and decides to rent bicycles to tour the island. The rental fee for a bike and helmet is \$27.00 per person for each hour. There are four people in the family renting bicycles. Which input/output (I/O) model correctly displays the domain and range of the situation where c , the total cost for the bicycle rental is a function of h , the number of hours the bikes are rented?

I/O Model 1

input	1	2	3	4	5
output	\$27	\$54	\$81	\$108	\$135

I/O Model 2

input	1	2	3	4	5
output	\$108	\$216	\$324	\$432	\$540

I/O Model 3

input	\$27	\$54	\$81	\$108	\$135
output	1	2	3	4	5

I/O Model 4

input	\$108	\$216	\$324	\$432	\$540
output	1	2	3	4	5

- a. I/O Model 1
 - b. I/O Model 2
 - c. I/O Model 3
 - d. I/O Model 4
- _____ 12. Divide. Simplify your answer.

$$(2x)^4$$

_____ 13. Which equation represents the data in the table?

x	1	2	3	4	5
y	3	6	9	12	15

a. $y = 0.25x - 3$

c. $y = x - 4$

b. $y = x - 3$

d. $y = 4x - 4$

_____ 14. Zahra spent \$20.50 on 10 party favors for her party. Each party favor for each kid was either a puzzle book or a magic trick. The boys each received a puzzle book that cost \$1.75 each. The girls each received a magic trick that cost \$2.25 each. How many boys and how many girls attended the party?

a. 4 boys and 6 girls

c. 6 boys and 4 girls

b. 5 boys and 5 girls

d. 7 boys and 3 girls

_____ 15. John is considering accepting one of two sales positions. ABC Company offers a yearly salary of \$45,000. XYZ Company offers a yearly salary of \$38,000 plus a 2% annual commission on sales. For what amount of sales s is the salary at XYZ Company greater than the salary at ABC Company?

a. $s > 7000$

c. $s > 70,000$

b. $s > 35,000$

d. $s > 350,000$

_____ 16. A manufacturing company is

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_____ 18.

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- _____ 21. The table compares the gas mileage of a car to the distance the car can travel on one tank of gas. A scatter plot of the data is also shown. For this line of best fit, predict what the gas mileage must be for a car to travel 250 miles.

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_____ 25. Write an equation for the line that has a y -intercept of 2 and is perpendicular to the line $3x + y = 6$.

a. $y = 3x + 2$

c. $y = \frac{1}{3}x + 2$

b. $y = 3x - 2$

d. $y = \frac{1}{3}x + 2$

_____ 26. Two snow resorts

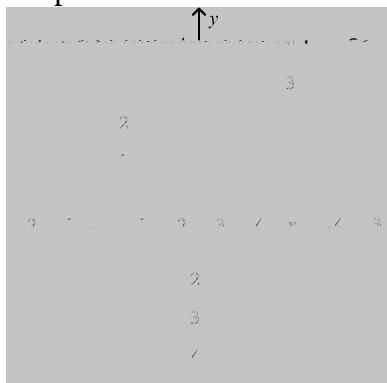
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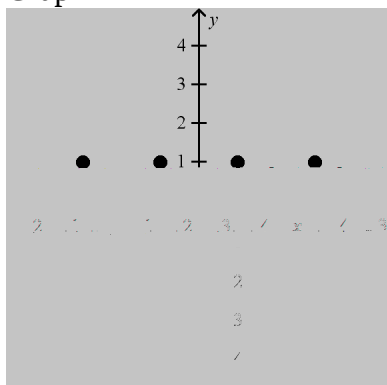
- _____ 30. The temperature of air in a room that began at 55°F is increasing by 8°F per hour.
The following equation represents

_____ 32. Determine which of the following graphs represent a function.

Graph A



Graph B



Graph C



- | | |
|--------------------------------------|----------------------------------|
| a. None of the graphs are functions. | c. Graphs A and B are functions. |
| b. All of the graphs are functions. | d. Graphs B and C are functions. |

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_____ 33. Kush simplified the expression below on the board for the class.

$$\sqrt{20} + \sqrt{5x} + 3\sqrt{5}$$

If Kush simplified the expression correctly, which of the following is his answer?

a. $5\sqrt{5} + \sqrt{5x}$

c. $3\sqrt{5} + \sqrt{5x}$

b. $7\sqrt{5} + \sqrt{5x}$

d. $4\sqrt{5} + \sqrt{5x}$

_____ 34.

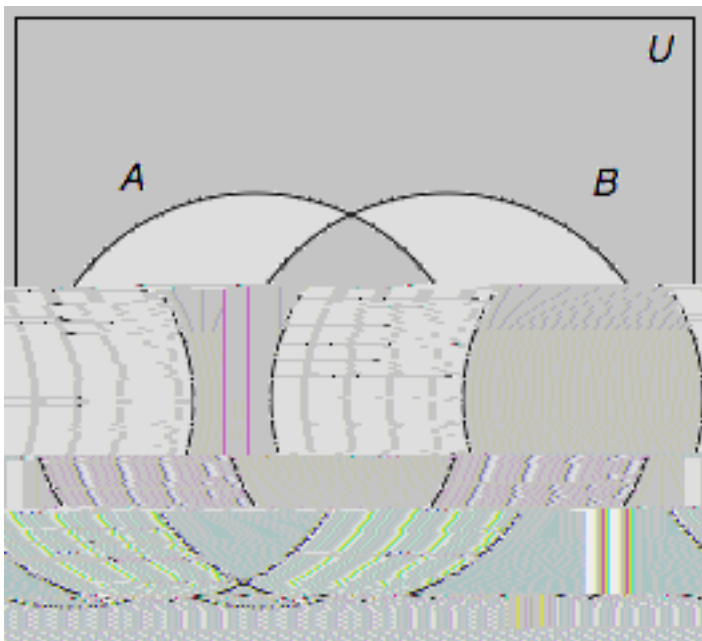
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- ____ 37. Look at the Venn diagram below. It shows set A and set B in the universe U . Which description represents the shaded regions?



a.

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- _____ 44. Thomas is a car salesman. The table shows the monthly salary that Thomas earns for the number of cars he sells. Use the data to graph the linear function. Write the equation of the line, identify the slope of the line and explain what the slope means.

Number of Cars Sold	Monthly

Name:

Name: _____

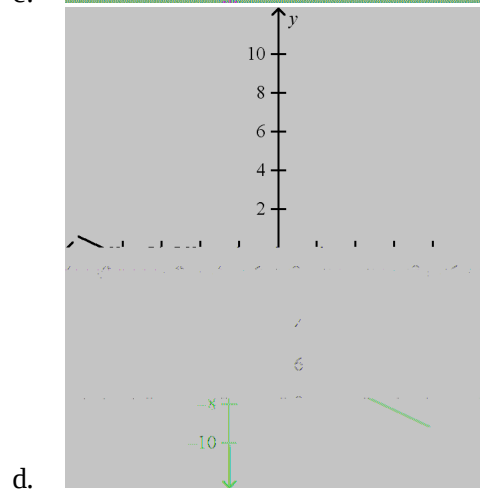
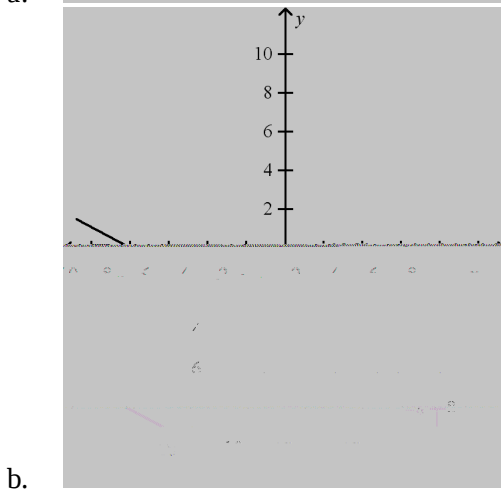
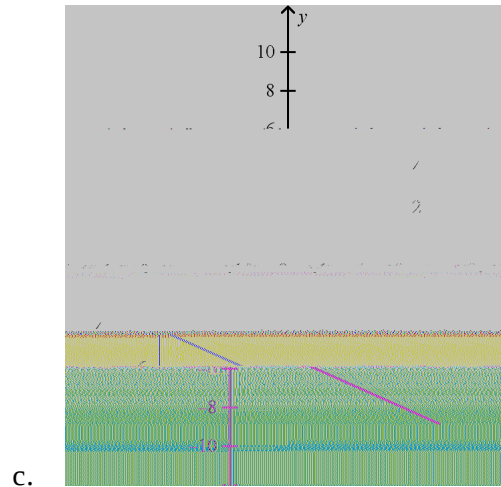
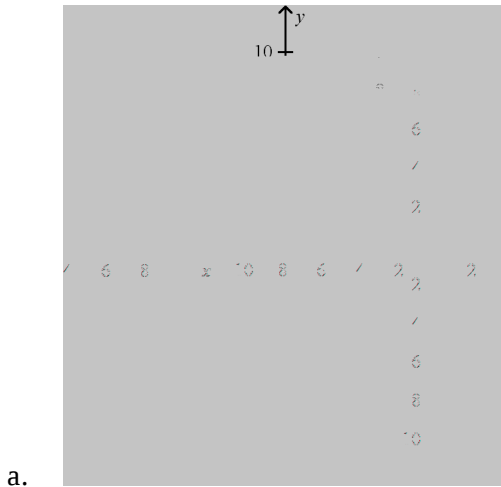
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_____ 48. Which of the following is a member of $M \times N$?

$$M = \{20, 30, 55, 60\}; N = \{30, 55, 65\}$$

- a. $(20, 20)$
- b. _____
- c. $(55, 60)$

_____ 51. Graph the line described by the equation $2x - 4y = 16$.



_____ 52. An object is thrown upward with an initial velocity of 35 meters per second. The object's distance, d , above the ground at any time, t , can be represented by the equation $d = 35t - 5t^2$. When will the object be 50 feet above the ground?

a. $t = 1$ sec and $t = 0.4$ sec

c. $t = 2$ sec and $t = 10$ sec

b. $t = 2$ sec and $t = 5$ sec

d. $t = 5$ sec and $t = 10$ sec

_____ 53. Jasmine and her sister are saving to buy MP3 players. Jasmine has \$50 and plans to save \$10 per week. Her sister has \$80 and plans to save \$7 per week. In how many weeks will Jasmine have more money saved than her sister?

a. 2 weeks

c. 10 weeks

b. 4 weeks

d. 11 weeks

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Algebra EOC Practice Test #2

Answer Section

MULTIPLE CHOICE

- | | | |
|------------|--------|--------------------|
| 1. ANS: D | PTS: 1 | STA: MA.912.A.3.10 |
| 2. ANS: A | PTS: 1 | STA: MA.912.A.3.4 |
| 3. ANS: C | PTS: 1 | STA: MA.912.D.7.1 |
| 4. ANS: D | PTS: 1 | STA: MA.912.A.3.9 |
| 5. ANS: A | PTS: 1 | STA: MA.912.A.4.2 |
| 6. ANS: B | PTS: 1 | STA: MA.912.A.4.3 |
| 7. ANS: D | PTS: 1 | STA: MA.912.A.4.3 |
| 8. ANS: A | PTS: 1 | STA: MA.912.A.4.3 |
| 9. ANS: C | PTS: 1 | STA: MA.912.A.3.8 |
| 10. ANS: B | PTS: 1 | STA: MA.912.A.7.8 |
| 11. ANS: B | PTS: 1 | STA: MA.912.A.2.4 |
| 12. ANS: B | PTS: 1 | STA: MA.912.A.4.4 |
| 13. ANS: C | PTS: 1 | STA: MA.912.A.3.11 |
| 14. ANS: A | PTS: 1 | STA: MA.912.A.3.15 |
| 15. ANS: D | PTS: 1 | STA: MA.912.A.3.5 |
| 16. ANS: B | PTS: 1 | STA: MA.912.A.7.8 |
| 17. ANS: A | PTS: 1 | STA: MA.912.A.5.4 |
| 18. ANS: A | PTS: 1 | STA: MA.912.A.3.9 |
| 19. ANS: D | PTS: 1 | STA: MA.912.A.3.9 |
| 20. ANS: B | PTS: 1 | STA: MA.912.A.4.2 |
| 21. ANS: B | PTS: 1 | STA: MA.912.A.3.11 |
| 22. ANS: C | PTS: 1 | STA: MA.912.A.2.3 |
| 23. ANS: C | PTS: 1 | STA: MA.912.A.4.1 |
| 24. ANS: C | PTS: 1 | STA: MA.912.A.3.4 |
| 25. ANS: C | PTS: 1 | STA: MA.912.A.3.10 |
| 26. ANS: B | PTS: 1 | STA: MA.912.A.3.15 |
| 27. ANS: D | PTS: 1 | STA: MA.912.D.7.1 |
| 28. ANS: B | | |

Distribute $\sqrt{6}$. Use the Product Property of Square Roots to multiply the factors in each term. If the radicand in either term contains any perfect square factors, factor the radicand(s) and simplify. Combine like terms if applicable.

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|------------|--------|-------------------|
| | PTS: 1 | STA: MA.912.A.6.2 |
| 29. ANS: A | PTS: 1 | STA: MA.912.A.3.3 |
| 30. ANS: D | PTS: 1 | STA: MA.912.A.3.8 |
| 31. ANS: A | PTS: 1 | STA: MA.912.A.4.2 |
| 32. ANS: C | PTS: 1 | STA: MA.912.A.2.3 |

