**Algebra I CP Midterm**

**Multiple Choice**

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

*Write the equation in slope-intercept form.*

\_\_\_\_ 1. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. |  |

\_\_\_\_ 2. *y* + 2 = (*x* – 4)

|  |  |  |  |
| --- | --- | --- | --- |
| a. | *y* = *x* + | c. | *y* = *x* – |
| b. | *y* = *x* – | d. | *y* = *x* + |

*Determine whether the graph shows a positive correlation, a negative correlation, or no correlation. If there is a positive or negative correlation, describe its meaning in the situation.*

\_\_\_\_ 3.

|  |
| --- |
| **Average Cycling Speed** |
|  |

|  |  |
| --- | --- |
| a. | no correlation |
| b. | negative; as time passes, speed decreases |
| c. | positive; as time passes, speed increases |
| d. | positive; as time passes, speed decreases |

\_\_\_\_ 4.

|  |
| --- |
| **Video Rental Fines** |
|  |

|  |  |
| --- | --- |
| a. | negative; as the number of videos rented increases, the amount of fine increases. |
| b. | negative; as the number of videos rented increases, the amount of fine decreases. |
| c. | no correlation |
| d. | positive; as the number of videos rented increases, the amount of fine decreases. |

\_\_\_\_ 5.

|  |
| --- |
| **People Entering Amusement Park** |
|  |
| Time (minutes) |

|  |  |
| --- | --- |
| a. | positive; as time passes, the number of people entering decreases. |
| b. | negative; as time passes, the number of people entering decreases. |
| c. | no correlation |
| d. | positive; as time passes, the number of people entering increases. |

*Graph the system of equations. Then determine whether the system has* no *solution,* one *solution, or* infinitely many *solutions. If the system has one solution, name it.*

\_\_\_\_ 6. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | no solution | c. | infinitely many |
| b. | one solution; (0, 1) | d. | one solution; (1, 0) |

\_\_\_\_ 7. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | no solution | c. | one solution; (6, –2) |
| b. | one solution; (–2, 6) | d. | infinitely many |

*Use substitution to solve the system of equations.*

\_\_\_\_ 8. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (–17, –7) | c. | (–7, –17) |
| b. | (3, 13) | d. | (23, 33) |

\_\_\_\_ 9. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (4, 5) | c. | (–10, –2) |
| b. | infinitely many solutions | d. | (22, 14) |

\_\_\_\_ 10. The sum of two numbers is 90. Their difference is 12. What are the numbers?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | no solution | c. | 35 and 47 |
| b. | 31 and 59 | d. | 39 and 51 |

\_\_\_\_ 11. At a local electronics store, CDs were on sale. Some were priced at $14.00 and some at $12.00. Sabrina bought 9 CDs and spent a total of $114.00. How many $12.00 CDs did she purchase?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 9 | c. | 5 |
| b. | 6 | d. | 3 |

*Use elimination to solve the system of equations.*

\_\_\_\_ 12. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (–2, 2) | c. | (2, –2) |
| b. | (20, –10) | d. | (–20, 10) |

\_\_\_\_ 13. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (–3, 7) | c. | (–1, 1) |
| b. | (7, –3) | d. | (1, –1) |

\_\_\_\_ 14. The sum of Jack and his father’s ages is 52. Jack’s father’s age is 2 less than 5 times Jack’s age. Find the ages of Jack and his father.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 10, 42 | c. | 9, 61 |
| b. | 9, 43 | d. | 9, 45 |

*Solve the inequality. Graph the solution on a number line.*

\_\_\_\_ 15. 

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

*Solve the inequality.*

\_\_\_\_ 16. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. |  |

\_\_\_\_ 17. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. |  |

\_\_\_\_ 18. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (all real numbers) | c. |  |
| b. |  | d. | (the empty set) |

*Solve the compound inequality and graph the solution set.*

\_\_\_\_ 19.  and 

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

\_\_\_\_ 20.  or 

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

\_\_\_\_ 21. At the start of a soccer match, the ball must weigh within 20 grams of 430 grams. What is the range of weight of the soccer ball?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | {*w* | *w*  420 or *w*  440} | c. | {*w* | *w*  410 or *w*  450} |
| b. | {*w* | 420  *w*  440} | d. | {*w* | 410  *w*  450} |

*Solve the system of inequalities by graphing.*

\_\_\_\_ 22. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. |  |

\_\_\_\_ 23. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. |  |

*Use the graph below to determine the number of solutions the system has.*

**

\_\_\_\_ 24. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | no solution | c. | two |
| b. | one | d. | infinitely many |

\_\_\_\_ 25. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | no solution | c. | two |
| b. | one | d. | infinitely many |

\_\_\_\_ 26. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | no solution | c. | two |
| b. | one | d. | infinitely many |

\_\_\_\_ 27. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | no solution | c. | two |
| b. | one | d. | infinitely many |

\_\_\_\_ 28. 

|  |  |  |  |
| --- | --- | --- | --- |
| a. | no solution | c. | two |
| b. | one | d. | infinitely many |

**Algebra I CP Midterm**

**Answer Section**

**MULTIPLE CHOICE**

1. B

2. B

3. B

4. C

5. D

6. D

7. B

8. A

9. D

10. D

11. B

12. C

13. A

14. B

15. D

16. C

17. A

18. C

19. A

20. C

21. D

22. C

23. A

24. B

25. B

26. D

27. B

28. A