**Foundations for Algebra**

**Winter Student**

**Enrichment Packet**

***ANSWER KEY***



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PRINCE GEORGE’S COUNTY PUBLIC SCHOOLS

Office of Academic Programs

Department of Curriculum and Instruction

**Foundations for Algebra Winter Enrtichment Choice Board**

**ANSWER KEY**

**Appetizer 1: Identifying Linear or Nonlinear Functions**

**Directions:** Identify if the function is linear or nonlinear. Write the **letter** of your answer in the appropriate box below.

**Nonlinear**

 **D B E R T**

**Linear**

**N O R Y**

**Appetizer 2: Classifying Solutions to Linear Equations**

1. √ 2. X 3. # 4. # 5. √ 6. √ 7. # 8. X 9. √ 10. X 11. # 12. X

**Appetizer 3: Solving Inequalities and Graphing Solutions**

1. x ≤ 30

2. x < –6

3. x ≤ –

4. x > 3

5. x ≤ 30

6. x > –15**Main Dish 1: Writing Equations in Slope-Intercept Form**

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

4. $y= \frac{3}{2}x-1$ 5. $y= -x+3$ 6. $y= \frac{3}{4}x+1$

**Main Dish 2: Equations and Functions Mixed Practice**

1. **B 2. A 3. D 4. C 5. B 6. B**
2. **C 8. D 9. A 10. D 11. D 12. C**

**Main Dish 3: Writing Systems of Equations**

|  |  |
| --- | --- |
| 1. $$\left\{\begin{array}{c}3\left(p+w\right)=708\\4\left(p-w\right)=708\end{array}\right.$$ | 2. $$\left\{\begin{array}{c}f+e=30\\3f+e=56\end{array}\right.$$ |
| 3. $$\left\{\begin{array}{c}2a+3c=49.50\\3a+c=44.50\end{array}\right.$$ | 4. $$\left\{\begin{array}{c}6p+4s=262\\s-p=13\end{array}\right.$$ |
| 5. $$\left\{\begin{array}{c}5h+3p=51\\h+p=13\end{array}\right.$$ | 6.$$\left\{\begin{array}{c}4s+3j=150\\s+2j=70\end{array}\right.$$ |

**Dessert 1 Puzzle Time**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | F | L | A | T | M | I | N | O | R |
| (–1, 5)  | (–6, –4) | (3, 8)  | (3, 1)  | (4, 0) | (1, 4) | (–1, 2) | (0, –5)  | (4, –2)  | (2, –3) |

**Dessert 2 Linear Functions Crossword Puzzle**

Across:

3. vertical

5. domain

7. relation

8. solution

9. expression

10. slope

Down:

1. function

2. linear

4. equation

6. variable

7. range