Name: \_\_\_\_\_

<u>Selected Response</u>: Put the letter of the best response in the space provided.

1. Which is an algebraic expression?

A. 
$$6 = 2x - 4$$
  
B.  $3x$   
C.  $4x = 8$   
D.  $\frac{x}{5} = 10$ 

2. Solve: 
$$t + 13 = 25$$
  
A. 12  
B. 24  
C. 36  
D. 38  
 $t = (2)$ 

What equation represents:
 "four less than a number divided by two is one?"

A. 
$$\frac{4}{x} - 2 = 1$$
  
B.  $\frac{x}{4} - 2 = 1$   
C.  $\frac{x}{2} - 4 = 1$   
D.  $4 - \frac{x}{2} = 1$   
 $\frac{1}{2} - 4 = 1$ 

1.)	
2.)	
3.)	
4.)	
5.)	
6.)	
7.)	
8.)	
9.)	
10.)	

4. Which equation would be best to solve for the side length of an equilateral triangle (all sides are the same) if the distance all around is 24?



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5. What is the unknown value of *x* on the balance scale below?



6. What is the second step to solve 4y - 3 = 5 algebraically? +3 f3

- A. Add 3 to both sides B. Subtract 3 from both sides C. Divide each side by 4 D. Multiply each side by 4  $4y = \frac{8}{4}$
- 7. Which equation has a solution k = 12?



- 8. Sam used systematic trail to solve the equation 5n + 1 = 16. She tried m = 4. What will she notice about her answer? **5(4)** 
  - A. Her answer is too smallB. That m equals 4C. Her answer is too big
    - D. Her answer is correct

- 20t1 21... too big should be 16.
- 9. What is the solution to the equation modeled by algebra tiles below?



10. Alex checked out books from the library. She returned 4 books, and still has 3 books at home. How many books did she borrow?



**Constructed Response:** 

Show ALL workings for FULL marks!!!

11. Solve each using **systematic trail** or **inspection**. [2 marks]



Dpositive 12. Solve each using algebra tiles. Verify your solution. [4 marks]



13. Solve the equation using the pan balances provided. Verify your solution. [3 marks]

2x + 3 = 7



14. Solve each equation **algebraically**. Show all workings for **FULL** marks. [8 marks]

A. 
$$x + \frac{1}{2} = 53$$
  
 $-\frac{1}{2} - \frac{1}{2}$   
B.  $f - \frac{1}{2} = 40$   
 $+\frac{1}{2} +\frac{1}{2}$   
 $f = 57$ 

$$\frac{1}{f=24}$$

$$f = 52$$

D. 
$$x - y = -12$$
  
 $75 + 5$   
 $x = -7$ 

E. 
$$4x + 12 = 24$$
  
-  $72 - 12$   
 $4x = 12$   
 $4x = 12$   
 $4x = 3$ 

F. 
$$2d - \frac{1}{2} = \frac{17}{13}$$
  
 $\frac{1}{3}$   $\frac{1}{3}$   
 $\frac{1}{2}d = \frac{20}{2}$   
 $\frac{1}{2}$   
 $\frac{1}{2}d = \frac{17}{2}$ 

- 15. Cohen tutors to earn extra money. He charges \$25 for each hour he tutors. During Christmas all his students combined, gave him \$50 extra in tips. If he made a total of \$150 during the month of December, how many hours did he tutor?
  - A. Choose and **state a variable** and **write an equation** you can use to solve the problem. [1 mark]

 $h=\pm of hours he lutored$ 35h + 50 = 150

B. Solve the equation in order to state the answer to the problem. [2 marks]

$$25h + 50 = 150$$
  
-  $50 - 50$ 

C. Verify the solution.

[1 mark]

