

10-1 A Worksheet

- Identify the given information accurately
- Determine which expression or equation best describes the given situation
- Be prepared to defend your answers

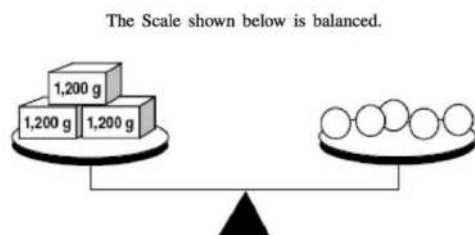
Name _____

Hour 1 2 3 4 5 6 7

Due Date:

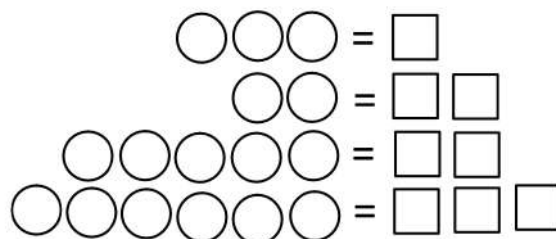
10-1: I can represent a real-world situations with a two step equation.

1) What is the weight of each ball on the right side of the scale?

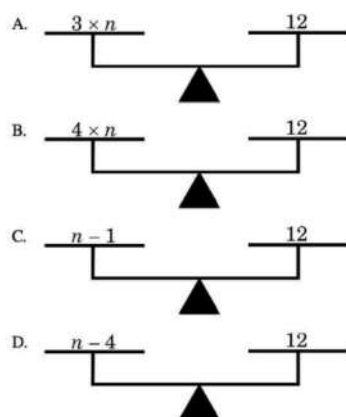


- A. 600 g B. 720 g C. 900 g D. 1,200 g

2) If $\bigcirc\bigcirc = \square$ which of the following is true?



3) Which scale is balanced if $n = 4$?



4) Mary has some trading cards. Julie has 3 times as many trading cards as Mary. They have 36 trading cards in all. Which of these equations represents their trading card collection?

- A. $3x = 36$ B. $x + 3 = 36$ C. $x + 3x = 36$ D. $3x + 36 = x$

5) Josie's age is four years greater than double Mario's age in n years, which of these equations represents Josie's age?

- A. $4n$ B. $4n + 2$ C. $42n + 4$ D. $2(n + 4)$

6) A telephone company charges \$0.05 per minute for long distance calls and \$0.12 per minute for long distance calls. Which expression gives the total cost in dollars for x minutes of local calls and y minutes of long-distance calls?

- A. $0.05x + 0.12y$ B. $0.05x - 0.12y$ C. $0.17(x + y)$ D. $0.17xy$

7) The local garden center has small tillers for rent. There is an initial charge of \$20.00, plus \$2.50 per day for each day the tiller is rented. Which expression shows the cost of renting the tiller for d days?

- A. $20d - 2.5$ B. $20d + 2.5$ C. $2.5d - 20$ D. $2.5d + 20$

8) At a hardware store the price of a rake, r , is one-third the price a shovel, s . Which equation represents the relationship between the price of a rake and the price of a shovel?

- A. $\frac{1}{3}r = s$ B. $3r = s$ C. $r = \frac{1}{3} + s$ D. $s = 3 + r$

9) During 8 basketball games, Marianne scored a total of x points, and Sarah scored a total of y points. Marianne scored more points than Sarah did. Which expression represents the difference between the average number of points Marianne and Sarah each scored per game?

- A. $\frac{x - y}{8}$ B. $\frac{x + y}{8}$ C. $8(x - y)$ D. $8(x + y)$

10) A box of sunflower seeds contains p packets. Each packet of sunflower seeds contains s seeds. Which equation can be used to find the number of sunflower seeds in a box, b ?

- A. $p = sb$ B. $p = \frac{s}{b}$ C. $b = ps$ D. $b = \frac{p}{s}$

11) Joelyn has decided to save \$12 a week to buy a stereo system costing \$125. Which expression shows how much she will still have to save after n weeks?

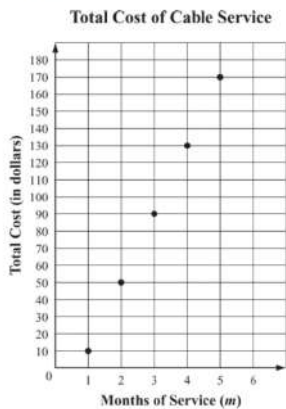
- A. $125 + 12n$ B. $125 - 12n$ C. $(125 + 12)n$ D. $(125 - 12)n$

12. Amanda rents space at an outdoor market. Each month she pays the owner of the outdoor market \$79 plus 10 percent of s , her total monthly sales.

Which of the following expressions represents the total amount of money that Amanda pays the owner for one month?

- A. $79(0.1s)$ B. $79s \div 0.1$
C. $79s + 0.1$ D. $79 + 0.1s$

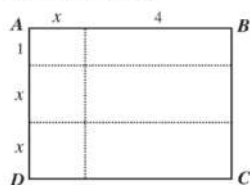
13. The graph below shows the total cost of cable service to new customers for the first five months.



Based on the data in the graph, which of the following expressions can be used to represent the total cost of cable service for m months?

- A. $10m + 30$ B. $10m + 40$
C. $40m - 10$ D. $40m - 30$

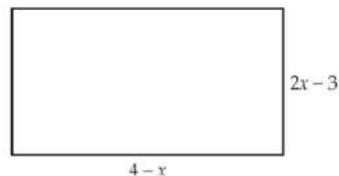
14. In the figure below, rectangle $ABCD$ contains six smaller rectangles with dimensions shown.



Which of the following represents the area of rectangle $ABCD$?

- A. $(x + 4) + (2x + 1)$
B. $2[(x + 4) + (2x + 1)]$
C. $2x \cdot x + 4 \cdot 1$
D. $(x + 4)(2x + 1)$

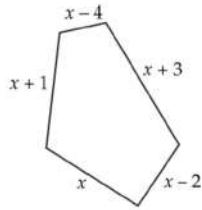
15. Look at the rectangle below.



Which of these expressions represents the perimeter of the rectangle?

- A. $2x - 3(4 - x)$
B. $(2x - 3)(4 - x)$
C. $(2x - 3) + (4 - x)$
D. $2(2x - 3) + 2(4 - x)$

16. A drawing of the swimming pool at Buckwood Camp is shown below.



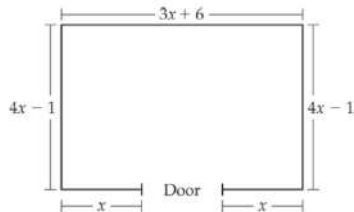
Which of these expressions represents the perimeter of the pool?

- A. $x + (x + 1) + (x - 4) + (x + 3) + (x - 2)$
 B. $x - (x + 1) - (x - 4) - (x + 3) - (x - 2)$
 C. $(x)(x)(x)(x)(x) + (1 - 4 + 3 - 2)$

17. In one day, a store sold 300 shirts at 25% off the regular price of x dollars. Which of these expressions represents the total amount, in dollars, that was received for the sale of shirts on that day?

- A. $0.25(x - 300)$ B. $25(x - 300)$
 C. $300(x - 25)$ D. $300(x - 0.25x)$

18. A rectangular room is shown below.



Which expression represents the width of the door?

- A. $(3x + 6) - x - x$
 B. $(4x - 1) - x - x$
 C. $(4x - 1) - (3x + 6)$
 D. $(3x + 6) + (4x - 1) + (4x - 1) + x + x$

19. An item is on sale for 25% off the original price. Which of these expressions represents the sale price of an item that originally sold for y dollars?

- A. $0.25y - y$ B. $y - 0.25y$
 C. $y - 0.25$ D. $25y - y$

20. Mrs. Nelson's class has read 50 pages from a book. The class will continue reading 15 pages per day. Which expression represents the amount of pages read after d days?

- A. $15d + 50$ B. $(15 + 50)d$
 C. $50d + 15$ D. $(50)(15)d$

21. Dan is 2 inches shorter than Greg. If Greg is g inches tall, which expression would give the sum of their heights?

- A. $\text{sum} = g + 2g$
 B. $\text{sum} = g + (g + 2)$
 C. $\text{sum} = g + (g - 2)$
 D. $\text{sum} = g - (g - 2)$

22. Isabel wants to mail a letter to her cousin in Chicago. The cost of sending mail first class is \$0.33 for the first ounce and \$0.22 for each additional ounce. Which expression represents the cost in dollars of mailing a first class letter weighing x additional ounces?

A. $0.33x - 0.22$ B. $0.33 + 0.22x$
 C. $0.33 + \frac{x}{0.22}$ D. $\frac{0.33}{x} + 0.22$

23. Nine children and six adults bought tickets to the circus. Which expression represents the total cost if c represents the cost of a child's ticket and a represents the cost of an adult's ticket?

A. $9c + 6a$ B. $6c + 9a$
 C. $15ac$ D. $15(a + c)$

24. Cell phone Company Y charges a \$10 start-up fee plus \$0.10 per minute, x . Cell phone Company Z charges \$0.20 per minute, x , with no start-up fee.

Which function represents the difference in cost between Company Y and Company Z?

A. $f(x) = -0.10x - 10$
 B. $f(x) = -0.10x + 10$
 C. $f(x) = 10x - 0.10$
 D. $f(x) = 10x + 0.10$

25. The table below shows the cost of a pizza based on the number of toppings.

Number of Toppings (n)	Cost (C)
1	\$12
2	\$13.50
3	\$15
4	\$16.50

Which function represents the cost of a pizza with n toppings?

A. $C(n) = 12 + 1.5(n - 1)$
 B. $C(n) = 1.5n + 12$
 C. $C(n) = 12 + n$
 D. $C(n) = 12n$

26. Jenna cut a piece of cloth several times. The table below shows the number of pieces of cloth she had after making several cuts.

Cuts	1	2	3	4	5	6
Pieces of Cloth	2	4	8	16	32	64

Which equation could be used to determine the number of pieces of cloth, y , Jenna had after making x cuts?

A. $y = 2x$ B. $y = 2^x$ C. $y = x^2$

- 27.) To become a member at a gym, you must pay a start-up fee of \$150 plus \$15 each month. Write an equation for the total bill t in terms of the number of months m .

$$y = mx + b$$



28.) Each hour Maggie baby-sits she charges \$7 plus \$1.25 for each child. Write an equation for Maggie's hourly rate h in terms of the number of children c .

$$y = mx + b$$



29.) Adele is paid a weekly salary of \$685. She is paid an additional \$23.50 for every hour, h of overtime she works. Write an equation for the total bill t in terms of the number of hours h .



30.) A plumber charges \$75 plus \$45 dollars per hour, h . Write an equation for the total bill t in terms of the number of hours h .



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12th, 10-1 A Worksheet 10/13/2013

1. Answer: B	21. Answer:
2. Answer: D	22. Answer: B
3. Answer: A	23. Answer: A
4. Answer: C	24. Answer: B
5. Answer: C	25. Answer: A
6. Answer: A	26. Answer: B
7. Answer: D	
8. Answer: B	
9. Answer: A	
10. Answer: C	
11. Answer: B	
12. Answer: D	
13. Answer: D	
14. Answer: D	
15. Answer: D	
16. Answer: A	
17. Answer: D	
18. Answer: A	
19. Answer: B	
20. Answer: A	