

Unit #2 - HW#4

Name: _____

Date: _____

1. Omar wants to solve the equation $3x - 2 = 10$. Which steps could Omar follow to find the solution?

- A. Add 2 to both sides. Then divide both sides by 3.
- B. Divide both sides by 3. Then add 2 to both sides.
- C. Subtract 2 from both sides. Then divide both sides by 3.
- D. Multiply both sides by 3. Then subtract 2 from both sides.

2. Juanita solved an equation incorrectly, as shown below.

$$\begin{aligned} 3x + 6 &= 24 \\ \frac{3x}{3} + 6 &= \frac{24}{3} \\ x + 6 &= 8 \\ x &= 2 \end{aligned}$$

- a) Explain in words the mistake Juanita made.
- b) Solve the equation $3x + 6 = 24$ correctly.

3. What value of x makes the equation below true?

$$\frac{x + 3}{2} = 8$$

- A. 1 B. 5 C. 13 D. 19

4. Solve for x .

$$0.5x + 78.2 = 287$$

- A. $x = 104.4$ B. $x = 417.6$ C. $x = 495.8$ D. $x = 730.4$

5. Which steps can be used to solve for the value of y ?

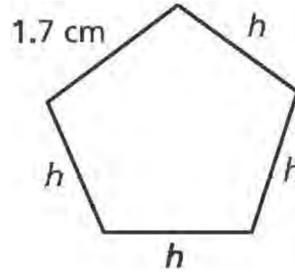
$$\frac{2}{3}(y + 57) = 178$$

- A. divide both sides by $\frac{2}{3}$ then subtract 57 from both sides
B. subtract 57 from both sides, then divide both sides by $\frac{2}{3}$
C. multiply both sides by $\frac{2}{3}$, then subtract 57 from both sides
D. subtract $\frac{2}{3}$ from both sides, then subtract 57 from both sides

6. Which algebraic expression represents “six less than half a number”?

- A. $\frac{1}{2}x - 6$ B. $6 - \frac{1}{2}x$ C. $\frac{1}{2}(x - 6)$ D. $(6 - \frac{1}{2})x$

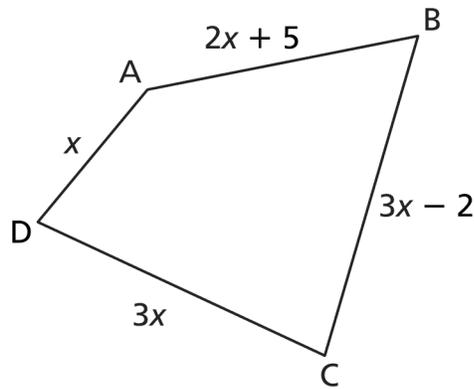
7. The perimeter of a certain pentagon is 10.5 centimeters. Four sides of this pentagon have the same length, in centimeters, h , and the other side has a length of 1.7 centimeters, as shown below.



What is the value of h ?

- A. 2.2 B. 3.7 C. 4.8 D. 8.8

8. In the figure $ABCD$ shown below, the total length of the sides equals 84 inches.



[not drawn to scale]

Find the length of side \overline{BC} .

9. Sammy drew a rectangle that was w inches wide. The expression $2(2w) + 2(w)$ represents the perimeter of the rectangle that Sammy drew. Which statement relates the perimeter to the width of the rectangle?
- A. The perimeter is 6 inches more than the width. B. The perimeter is 6 times the width.
C. The perimeter is 2 inches more than the width. D. The perimeter is 2 times the width.

10. Members of a baseball team raised \$967.50 to go to a tournament. They rented a bus for \$450.00 and budgeted \$28.75 per player for meals. They will spend all the money they raised.

Write and solve an equation that models this situation and could be used to determine the number of players, p , the team could bring to the tournament.

11. Ms. Gartland bought x number of shirts for the new members of her chorus. The cost for x number of shirts, including \$3.99 shipping, was \$77.49. Each shirt cost \$12.25. There was no sales tax on this purchase. Which equation could be used to find x ?

- A. $3.99(x + 12.25) = 77.49$ B. $3.99x + 12.25 = 77.49$
C. $12.25(x + 3.99) = 77.49$ D. $12.25x + 3.99 = 77.49$

12. Craig went bowling with \$25 to spend. He rented shoes for \$5.25 and paid \$4.00 for each game. What was the greatest number of games Craig could have played?

- A. 4 B. 5 C. 6 D. 7

13. Carmine paid an electrician x dollars per hour for a 5-hour job plus \$70 for parts. The total charge was \$320. Which equation can be used to determine how much the electrician charged per hour?
- A. $5x = 320 + 70$ B. $5x = 320 - 70$ C. $(70 + 5)x = 320$ D. $(70 - 5)x = 320$

14. Mr. Gonzales has only \$42.50 to spend at a clothing store. He wants to buy a shirt that costs \$29, including tax, and some bracelets that cost \$4.50 each, including tax.

Write an equation to determine x , the maximum number of bracelets Mr. Gonzales could buy.

Solve the equation to determine the number of bracelets Mr. Gonzales could buy.

15. At a store, a hat has a regular price of x dollars. During a sale, the price of the hat is discounted by 20%. The expression $0.8x$ describes the discounted price, in dollars, of the hat. Which expression also describes the discounted price, in dollars, of the hat?
- A. $0.2x$ B. $x - 20$ C. $x - 0.2$ D. $x - 0.2x$

16. David bought a computer that was 20% off the regular price of \$1,080. If an 8% sales tax was added to the cost of the computer, what was the total price David paid for it?
- A. \$302.40 B. \$864.00 C. \$933.12 D. \$1,382.40

17. The table below shows a relationship between x and y .

x	y
2	8
4	10
6	12
8	14
10	16

What equation represents the relationship between x and y ?

- A. $y = 2x$ B. $y = 4x$ C. $y = x + 6$ D. $y = 2x + 2$
18. Tony joined a book club. He received 8 free books when he joined. The table below shows the total number of books, n , he had each month, t , since joining the club.

TONY'S BOOKS

Month (t)	Total Number of Books (n)
0	8
1	11
2	14
3	17
4	20

Which equation can be used to find the total number of books, n , Tony will have from the book club after t months?

- A. $n = 8t$ B. $n = 3t$ C. $n = 8t + 3$ D. $n = 3t + 8$
19. Solve the equation below for p .

$$3(p + 6) = 5p + 4$$

20. Solve the equation below for x .

$$2(6 + 2x) = 8x$$

A. $x = 1$

B. $x = 2$

C. $x = 3$

D. $x = 6$

21. Find the value of x in the equation below.

$$3(x + 2) = x$$

A. -3

B. -1

C. 2

D. 3