

NAME _____ DATE _____ PER. _____

Review - Solving Equations

Solve each equation. Show ALL steps.

1. $7x + 2 = 5x + 8$

2. $4(2x - 5) = 5x + 4$

3. $\frac{n}{4} - 7 = -13$

4. $-32 = 4x$

5. $19 - (p + 3) = 17$

6. $0.2t + 29 - 0.8t = 5$

7. $3(m - 2) - 5 = 8 + 3(m - 4)$

8. $12 - 3(2w + 1) = 7w - 3(7 + w)$

9. $10 - 3x = 31$

10. $c - 3 = c + 3$

11. $6 - 7(a + 1) = -2a - 6 + 5a$

12. $\frac{1}{3}(18x - 36) = 6x - 12$

Write an equation for each problem and solve.

13. To rent a car from The Car Rental Place Juan must pay \$20 plus an additional \$1.50 per mile that he drives. If Juan has a total of \$350 to spend on renting a car, how many miles can he afford to drive it?

Equation: _____

14. A moving company charges \$1200 for the supplies needed to pack up a small house and an additional \$90 per hour to do the loading and moving. If the cost of moving is \$1740 how many hours did the moving company need to move the small house?

Equation: _____

15. Seven decreased by twice a number is -19. Find the number.

Equation: _____

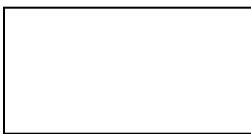
16. Mr. Adams works at the local clothing store. His base salary is \$250 a week plus an additional $\frac{1}{4}$ of his sales. If his total salary for the week is \$462.50, what were his total sales for that week?

Equation: _____

17. Megan had a coupon for \$5 off the purchase of one item. She decided to buy a shirt that was on sale for $\frac{3}{4}$ of its original price. After using the coupon Megan only paid \$19 for the shirt before taxes. What was the original price of the shirt?

Equation: _____

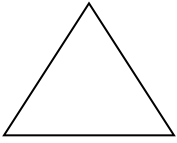
18. The length of a rectangle is 5 mm less than 4 times the width. If the perimeter is 75 mm, what is the length of the rectangle?



Equation: _____

19. The perimeter of a triangle is 36 inches. If the three sides of the triangle are x inches, $3x + 4$ inches, and $x + 2$ inches, what is the length of each side?

Equation: _____



20. A house-painting company charges \$376 plus \$12 per hour. Another painting company charges \$280 plus \$15 per hour. How long is a job for which both companies charge the same amount?

Equation: _____

21. Devon wants to save \$250 in time for his family's vacation. He currently has \$65 and plans to mow lawns until he reaches his goal. If he receives \$25 for each law that he mows, how many lawns does he have to mow in order to reach his goal?

F. 6 lawns

H. 8 lawns

G. 7 lawns

J. 9 lawns

22. The equation $F = \frac{9}{5}C + 32$ changes Celsius temperature to Fahrenheit temperature. If the Fahrenheit temperature is -32.8° , what is the Celsius temperature?

Equation: _____

23. Which of the following statements does NOT represent the equation $4n - 3 = -20$?

- A. Three less than 4 times a number is -20.
- B. The difference of 4 times a number and 3 is -20.
- C. Four times a number less than 3 is -20
- D. Four times a number decreased by 3 is -20.

24. Which of the following statements does NOT represent the equation $\frac{x}{2} + 3 = 5$?

- A. The quotient of a number and 2 increased by 3 is 5.
- B. Three added to half a number is 5.
- C. Three more than twice a number is 5.
- D. The sum of half a number and 3 is 5.

25. Which of the following represents the equation $3(x - 1) = 10$?

- A. Three times a number decreased by 1 is 10.
- B. Three times the difference of a number and 1 is 10.
- C. The product of three and the sum of a number and 1 is 10.
- D. One less than three times a number is 10.

26. Find the solution to: $\frac{-4}{x-2} = \frac{8}{x+5}$

27. Solve: $\frac{10}{r+1} = \frac{-2}{3}$

28. Mr. James bought four tacos and a drink for \$11.35. If all drinks are \$0.99, what is the cost of each taco?

Equation: _____

29. Three more than 25% of a number is equivalent to the difference of that number and 9. Find the number.

Equation: _____

30. If [equation], find the value of $3x - 4$

Answers in random order:

-36	32	-16	2.59	$x - 25 = 6$
-7	40	-8	A	$x + 25 = 6$
29	-1	$-\frac{1}{3}$	C	$x + 6 = 25$
3	8	17.5	C	No solution
6	3	16	D	No solution
-24	$\frac{1}{2}$	$-\frac{55}{3}$	$-10x + 10$	All real numbers