

CHAPTER
3**Chapter Test C***For use after Chapter 3***Solve the equation.**

1. $-\frac{3}{4}n = 12$

2. $-18.4 = b - 14.7$

3. $\frac{5}{8} - y = \frac{3}{4}$

4. $\frac{7}{12}x - 3 = 4$

5. $3 = \frac{1}{3} - 2b$

6. $\frac{2}{3}z + z = \frac{2}{3}$

7. A contractor wants to use 34 feet of molding, cut into three pieces, to trim the sides and top of a garage door. The long piece is 1.5 feet longer than three times the length of each shorter piece. Find the length of each piece.

Solve the equation, if possible.

8. $3[2 - 3(m - 2)] = 12$

9. $-1.6(b - 2.35) = -11.28$

10. $2x + 3(x - 5) = 15$

11. $4 = 9 - 3(2w + 1) - 5w$

12. $2(c - 4) + 8 = \frac{1}{2}(6c + 20)$

13. $2q - 4 + 8q = 7q - 8 + 3q$

14. $-7(t - 3) + 4t = 3(7 + t)$

15. $2.1d + 18 = 2.16(d + 8)$

16. A jewelry maker produces necklaces that sell for \$85 each. The jewelry maker's costs include \$35 in materials for each necklace plus fixed costs of \$1650. How many necklaces must the jeweler sell to break even?

Solve the proportion.

17. $\frac{15}{45} = \frac{72}{a}$

18. $\frac{b}{12.8} = \frac{9}{3.2}$

19. $\frac{0.5}{2.4} = \frac{c}{15}$

20. $\frac{5}{2d - 3} = \frac{10}{d + 3}$

21. $\frac{2f}{7} = \frac{f - 2}{14}$

22. $\frac{4.5}{g + 2} = \frac{3}{0.5g - 1}$

Answers

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2. _____

3. _____

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22. _____

CHAPTER
3
Chapter Test C *continued*
For use after Chapter 3

- 23.** The ratio of weight on the moon to weight on Earth is 1 : 6. How many pounds would a 144-pound person weigh on the moon?
- 24.** A simple syrup used for ice cream toppings requires 2 cups of sugar and $\frac{2}{3}$ cup of boiling water. How many cups of sugar are required for 2 cups of boiling water?

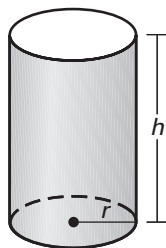
Solve the percent problem.

- 25.** 48 is 12% of what number? **26.** What percent of 16 is 20?
- 27.** What number is 175% of 76? **28.** What percent of 200 is 96?
- 29.** The cost of dinner for a party of eight people is \$139.50. For large groups of people an 18% gratuity is added to the cost of the dinner, after a 6% sales tax. Find the total bill for the dinner.

Write the equation in function form.

30. $y - 7 = \frac{1}{3}(x - 9)$ **31.** $4x - 6y - 8 = 0$

In Exercises 32 and 33, use the following information. The surface area of a cylinder is given by $S = 2\pi rh + 2\pi r^2$ where r is the radius of the base and h is the height of the cylinder.



- 32.** Solve the formula for h .
- 33.** What is the height of a cylinder when the surface area is 75.36 square inches and the radius is 2 inches? Use 3.14 for π .

Answers

- 23.** _____
- 24.** _____
- 25.** _____
- 26.** _____
- 27.** _____
- 28.** _____
- 29.** _____
- 30.** _____
- 31.** _____
- 32.** _____
- 33.** _____