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CHAPTER TEST

Tell whether the number is a real number, a rational number, an irrational number, an integer, or a whole number.

1. $-\frac{1}{4}$ 2. $\sqrt{90}$ 3. $-\sqrt{144}$ 4. 8.95

Order the numbers in the list from least to greatest.

5. $-\frac{5}{3}, -2, 3, \frac{1}{2}, -1.07$ 6. $\sqrt{15}, -4.3, 4.2, 0, -\sqrt{25}$

Solve the equation. Check your solution.

7. $5 + r = -19$ 8. $z - 8 = -12$ 9. $-11x = -77$
 10. $\frac{a}{9} = 6$ 11. $15q - 17 = 13$ 12. $3y + 2 = 26$
 13. $\frac{b}{4} + 5 = 14$ 14. $\frac{m}{10} - 6 = 20$ 15. $6j + 5j = 33$
 16. $4k - 9k = 10$ 17. $14c - 8c + 7 = 37$ 18. $4w - 21 + 5w = 51$
 19. $-19.4 - 15d + 22d = 4.4$ 20. $-12h + 39 = -4h - 17$ 21. $-5.7v - 44.2 = -8.3v$
 22. $-6.5t + 15 = -9.7t + 43.8$ 23. $3(3n + 4) = 54 + 6n$ 24. $\frac{1}{3}(24p - 66) = 3p + 43$

Solve the proportion. Check your solution.

25. $\frac{3}{4} = \frac{z}{16}$ 26. $\frac{72}{45} = \frac{8}{w}$ 27. $\frac{k}{9} = \frac{63}{81}$
 28. $\frac{-5n}{4} = \frac{15}{2}$ 29. $\frac{34}{6} = \frac{2x + 1}{3}$ 30. $\frac{-4a - 1}{-10a} = \frac{3}{8}$

Write the equation so that y is a function of x .

31. $8x + y = 14$ 32. $-9x + 3y = 18$ 33. $4x = -2y + 26$

34. **MOVIES** The ticket prices at a movie theater are shown in the table. A family purchases tickets for 2 adults and 3 children, and the family purchases 3 boxes of popcorn of the same size. The family spent a total of \$40.25. How much did each box of popcorn cost?

Ticket	Price
Adults	\$8.50
Children	\$5.50

35. **ICE SKATING** To become a member of an ice skating rink, you have to pay a \$30 membership fee. The cost of admission to the rink is \$5 for members and \$7 for nonmembers. After how many visits to the rink is the total cost for members, including the membership fee, the same as the total cost for nonmembers?
36. **SCALE DRAWING** You are making a scale drawing of your classroom using the scale 1 inch : 3 feet. The floor of your classroom is a rectangle with a length of 21 feet and a width of 18 feet. What should the length and width of the floor in your drawing be?