

Chapter 2

1. The law firm of Dewey, Cheetham, and Howe handled 45 personal injury cases this past year. this was $\frac{9}{5}$ of the cases handled by the rival firm of Gypsum-Goode. How many personal injury cases were handled by Gypsum-Goode last year?
A) 20 cases B) 45 cases C) 25 cases D) 30 cases
2. Cab drivers in Metro City charge \$4 per mile plus a fixed charge of \$2 for the tip. If a tourist pays \$46 for a cab ride, then how many miles was the cab ride?
A) 10 miles B) 13 miles C) 14 miles D) 11 miles
3. Solve.
$$\frac{11}{12}m + 12 = m - \frac{1}{12}$$

A) {142} B) {-143} C) {145} D) {143}
4. Solve.
$$0.8q + 0.7 = 0.9q$$

A) {7} B) {70} C) {10} D) {9}
5. Solve the given equation and identify it as a conditional equation, an inconsistent equation, or an identity.
$$s + 6s = 7s$$

A) $\emptyset$, inconsistent B) All real numbers, identity C) {0}, conditional
6. Solve the given equation and identify it as a conditional equation, an inconsistent equation, or an identity.
$$v - 11 = v + 11$$

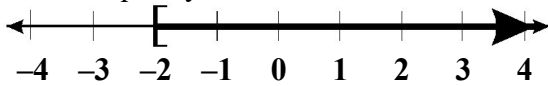
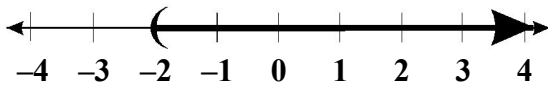
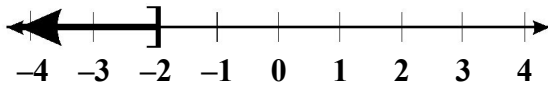
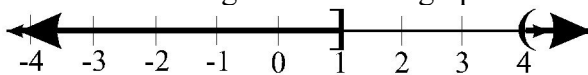
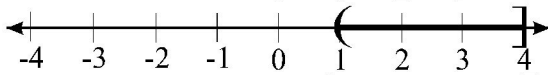
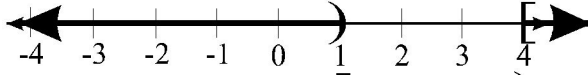
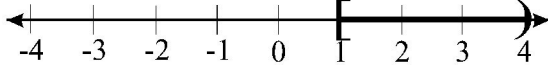
A) $\emptyset$, inconsistent B) All real numbers, identity C) {0}, conditional
7. Solve the given equation and identify it as a conditional equation, an inconsistent equation, or an identity.
$$8u + 11u = 9u$$

A) $\emptyset$, inconsistent B) All real numbers, identity C) {0}, conditional
8. Solve the given equation and identify it as a conditional equation, an inconsistent equation, or an identity.
$$64 - 4(s + 5) = 0$$

A) $\emptyset$, inconsistent B) All real numbers, identity C) {11}, conditional

9. Ferdinand sold his algebra textbook using an internet auction site that charges a commission of 8% of the selling price. After the commission was paid, Ferdinand received \$22.40. If x represents the selling price, then x satisfies $x - 0.08x = 22.40$. Solve this equation to find the selling price.
A) \$24.35 B) \$21.82 C) \$27.34 D) \$28.97
10. Solve for x .
$$8(x - a) - (28b - x) = a - b$$

A) $x = 4a + 3b$ B) $x = 4a + 4b$ C) $x = a + 3b$ D) $x = a + 4b$
11. Find y given that $x = 6$ and $y = 3x - 1$.
A) 17 B) 7 C) 5 D) 19
12. Translate into an algebraic expression.
25 decreased by the quotient of x and 7
A) $\frac{25 - x}{7}$ B) $\frac{x}{7} - 25$ C) $25 + \frac{x}{7}$ D) $25 - \frac{x}{7}$
13. Find an algebraic expression for the underlined quantity.
The distance, given that the rate is x miles per hour and the time is 5 hours.
A) $5x$ miles B) $x - 5$ miles C) $\frac{5}{x}$ miles D) $x + 5$ miles
14. Find three consecutive integers whose sum is 81.
A) 25, 26, 27 B) 26, 28, 30 C) 26, 27, 28 D) 27, 28, 29
15. Lori built a dog lot for her dog, Chollie, by fencing in a rectangular area of her yard. If Chollie's lot required 52 feet of fence and the length is 2 feet longer than the width, then what are the length and width of Chollie's dog lot?
A) 6 feet long and 20 feet wide C) 10 feet long and 16 feet wide
B) 18 feet long and 8 feet wide D) 14 feet long and 12 feet wide
16. Carol drove for 2 hours on a two-lane state road. She then increased her speed by 20 miles per hour on the freeway and drove for 6 more hours. If the total trip was 480 miles, then what was her speed on the freeway?
A) 60 mph B) 65 mph C) 45 mph D) 67 mph
17. James paid \$285 for a DVD player that was priced originally at \$300. What was the discount rate?
A) 3% B) 10% C) 7% D) 5%

18. Mark and Brenda wish to get \$128,800 for their home. The real estate agent's commission is 8% of the selling price. What should the selling price be?
A) \$141,200 B) \$142,500 C) \$128,800 D) \$140,000
19. Liam invested some money in the Abernathy Fund and \$8,436 more than that amount in the Carlson Fund. For the year he was in these funds, the Abernathy fund paid 8% simple interest and the Carlson Fund paid 11% simple interest. If the income from the two funds totalled \$2,175.12, then how much was invested in each fund?
A) \$6,564 in Abernathy and \$15,000 in Carlson
B) \$16,500 in Abernathy and \$8,064 in Carlson
C) \$8,064 in Abernathy and \$16,500 in Carlson
D) \$15,000 in Abernathy and \$6,564 in Carlson
20. How many pints of a 7% cleaning solution must be mixed with 9 pints of a 15% cleaning solution to give a 13% solution?
A) 6 pints B) 3 pints C) 4 pints D) 9 pints
21. Graph the inequality: $x < -2$
A) 
B) 
C) 
D) 
22. Which of the following is the correct graph of the inequality $1 < x \leq 4$?
A) 
B) 
C) 
D) 
23. At a 10% discount rate, Jack's discount was more than \$27 on the jacket he purchased. Write an inequality to describe this situation using p for the original price of the jacket.
A) $0.1p > 27$ B) $0.9p > 27$ C) $0.1p \geq 27$ D) $1.1p > 27$

24. Write the appropriate inequality symbol in the blank so that the two inequalities are equivalent.

$$39 \geq 3r$$

$$13 \underline{\hspace{1cm}} r$$

- A) $13 \leq r$ B) $13 \geq r$ C) $13 < r$ D) $13 > r$

25. Solve and write your solution in interval notation.

$$-21 < 33 - 9x \leq -3$$

- A) $[4, 6)$ B) $\emptyset$ C) $[2, 6)$ D) $(2, 6]$

26. The length of a rectangle must be 6 centimeters more than the width, and the perimeter must be at least 36 centimeters. What is the range of values for the width?

- A) At least 6 centimeters C) No more than 12 centimeters
B) At least 12 centimeters D) At most 6 centimeters

Answer Key

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