Determine whether the given value of the variable is a solution.

1. \(9 + x = 21\) for \(x = 11\) _____
2. \(n - 12 = 5\) for \(n = 17\) _____
3. \(25 \cdot r = 75\) for \(r = 3\) _____
4. \(72 \div q = 8\) for \(q = 9\) _____
5. \(28 + c = 43\) for \(c = 15\) _____
6. \(u \div 11 = 10\) for \(u = 111\) _____
7. \(k \div 8 = 4\) for \(k = 24\) _____
8. \(16x = 48\) for \(x = 3\) _____
9. \(73 - f = 29\) for \(f = 54\) _____
10. \(67 - j = 25\) for \(j = 42\) _____
11. \(39 \div v = 13\) for \(v = 3\) _____
12. \(88 + d = 100\) for \(d = 2\) _____
13. \(14p = 20\) for \(p = 5\) _____
14. \(6w = 30\) for \(w = 5\) _____
15. \(7 + x = 70\) for \(x = 10\) _____
16. \(6 \cdot n = 174\) for \(n = 29\) _____

Replace each \(\square\) with a number that makes the equation correct.

17. \(5 + 1 = 2 + \square\) _____
18. \(10 - \square\) = \(12 - 7\) _____
19. \(\square \cdot 3 = 2 \cdot 9\) _____
20. \(28 \div 4\) = \(14 \div \square\) _____
21. \(\square + 8 = 6 + 3\) _____
22. \(12 \cdot 0 = \square \cdot 15\) _____

23. Carla had $15. After she bought lunch, she had $8 left. Write an equation using the variable \(x\) to model this situation. What does your variable represent?

24. Seventy-two people signed up for the soccer league. After the players were evenly divided into teams, there were 6 teams in the league. Write an equation to model this situation using the variable \(x\).
**Practice**

**LESSON 2-4 Equations and Their Solutions**

Determine whether the given value of the variable is a solution.

1. $9 + x = 21$ for $x = 11$ **No**
2. $n - 12 = 5$ for $n = 17$ **Yes**
3. $25 \cdot r = 75$ for $r = 3$ **Yes**
4. $72 \div q = 8$ for $q = 9$ **Yes**
5. $28 + c = 43$ for $c = 15$ **Yes**
6. $u \div 11 = 10$ for $u = 111$ **No**
7. $\frac{k}{8} = 4$ for $k = 24$ **No**
8. $16x = 48$ for $x = 3$ **Yes**
9. $73 - f = 29$ for $f = 54$ **No**
10. $67 - j = 25$ for $j = 42$ **Yes**
11. $39 \div v = 13$ for $v = 3$ **Yes**
12. $88 + d = 100$ for $d = 2$ **No**
13. $14p = 20$ for $p = 5$ **No**
14. $6w = 30$ for $w = 5$ **Yes**
15. $7 + x = 70$ for $x = 10$ **No**
16. $6 \cdot n = 174$ for $n = 29$ **Yes**

Replace each $?$ with a number that makes the equation correct.

17. $5 + 1 = 2 + ?$ **4**
18. $10 - ? = 12 - 7$ **5**
19. $? \cdot 3 = 2 \cdot 9$ **6**
20. $28 \div 4 = 14 \div ?$ **2**
21. $? + 8 = 6 + 3$ **1**
22. $12 \cdot 0 = ? \cdot 15$ **0**

23. Carla had $15. After she bought lunch, she had $8 left. Write an equation using the variable $x$ to model this situation. What does your variable represent?

$$15 - x = 8; x = \text{the amount she spent on lunch}$$

24. Seventy-two people signed up for the soccer league. After the players were evenly divided into teams, there were 6 teams in the league. Write an equation to model this situation using the variable $x$.

$$72 \div x = 6$$