

Lesson 8-3

Reinforce Understanding

Write and Solve Equations Using Multiplication or Division

I can solve one-step multiplication and division equations using inverse operations.

Worked model

A stamp album has 7 pages that each hold p stamps. It holds 91 stamps in all. Solve $7p = 91$.

1. The variable p is multiplied by 7, so the inverse operation is division.
2. Divide BOTH sides by 7 so the equation stays balanced.
3. Left side: $7p \div 7$ leaves p . Right side: $91 \div 7$ gives 13.
4. Check: 7×13 makes 91, so both sides are equal.

Answer: $p = 13$, so each page holds 13 stamps.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Sort each equation by the inverse operation needed.

Write the name of the correct group on each line.

Groups: Divide both sides Multiply both sides

- _____ $4x = 32$
- _____ $7n = 56$
- _____ $10p = 80$
- _____ $x / 6 = 3$
- _____ $m / 2 = 15$
- _____ $y / 9 = 4$

2. Solve: $6x = 42$

Circle the letter of the best answer. Show how you know.

- A. $x = 7$
- B. $x = 36$
- C. $x = 48$
- D. $x = 252$

Show your work

3. Solve: $n / 3 = 8$

Circle the letter of the best answer. Show how you know.

- A. $n = 3$
- B. $n = 5$
- C. $n = 11$
- D. $n = 24$

Show your work
