

Lesson 8-7

Reinforce Understanding

Equations and Inequalities Problem Solving

I can model and solve real-world problems using equations and inequalities.

Worked model

Clue: 'A total divided equally among 4 people gave each \$85.'

1. This has an exact total, so I use an equation. Let t be the total.
2. Divided among 4 to get 85 means $t \div 4 = 85$, so $t = 85 \times 4 = 340$.
3. Check reasonableness: \$340 split 4 ways is \$85 each. That makes sense!

Practice

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

1. Which model is correct for: 'A number divided by 6 equals 7'?

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

- A. $n / 6 = 7$
- B. $6n = 7$
- C. $n - 6 = 7$
- D. $n + 6 = 7$

Show your work

2. Sort each problem: equation or inequality?

Write the name of the correct group on each line.

Groups: Equation (=) Inequality ($<$, $>$, $\leq$, $\geq$)

- _____ Five boxes weigh exactly 60 pounds total. How much does each weigh?
- _____ A number plus 8 equals 20.
- _____ A shelf holds at most 30 books. There are already 17. How many more fit?
- _____ The temperature must stay above 32 degrees.

3. A museum has some paintings. After adding 12, they have 45. Which equation models this?

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

- A. $p + 12 = 45$
- B. $p - 12 = 45$
- C. $12p = 45$
- D. $p / 12 = 45$

Show your work
