LESSON MAKER PRO

Prove It Math

Use math evidence to test each claim.

GRADE 5 · 5.MP.3

5.MP.3 "Construct viable arguments and critique the reasoning of others."

NAME _____ DATE _____

BUILD AN ARGUMENT

To test a claim, write an equation that matches the story, solve it, and check your result. State whether the claim is correct, then use your equation as evidence.

WORKED EXAMPLE

A reader has 54 pages left in a book and reads 6 pages each day. Jordan says the book will take 8 days to finish. Is Jordan correct?

1. Write 54 / 6.
2. Divide: 54 / 6 = 9.
3. Check: 9 x 6 = 54.

Answer: No. The book will take 9 days.

PRACTICE 5 problems

1 A pet shop puts 56 treats equally into 7 bags. Eli says each bag gets 7 treats. Is Eli correct? Write an equation and a sentence.

ANSWER _____

2 The art club sets out 8 tables with 13 seats at each table. Sam says there are 104 seats. Is Sam correct? Show an equation.

ANSWER _____

3 A smoothie recipe uses 2/3 cup of fruit for each pitcher. Priya makes 3 pitchers and says she needs 2 cups of fruit. Do you agree?

ANSWER _____

4 A player has 75 game points and loses 28 points. Mateo says the player has 57 points left. Is Mateo correct?

ANSWER _____

5 Two notebooks cost $4.25 each. Nia says the total cost is $8.00. Is her claim correct?

ANSWER _____

APPLY IT Show your work

1 At a robotics sale, 11 teams each sell 16 key chains. They also sell 23 single key chains. Ava says they sell 199 key chains altogether. Is Ava's argument viable? Show your work.

WORK SPACE

ANSWER _____

2 A game club has 180 tokens. It gives away 3/5 of the tokens, then gives away 24 more tokens. Ben says 132 tokens remain. Is Ben correct? Explain with equations.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A shelter has 12 rooms with 14 kittens in each room. After 39 kittens are adopted, Kim writes 12 x (14 - 39). Omar writes (12 x 14) - 39. Which argument is viable? Explain why.

WORK SPACE AND ANSWER

ANSWER KEY # Prove It Math

GRADE 5 · 5.MP.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A pet shop puts 56 treats equally into 7 bags. Eli says each bag gets 7 treats. Is Eli correct? Write an equation and a sentence.	**No. 56 / 7 = 8, so each bag gets 8 treats.**
2	The art club sets out 8 tables with 13 seats at each table. Sam says there are 104 seats. Is Sam correct? Show an equation.	**Yes. 8 x 13 = 104 seats.**
3	A smoothie recipe uses 2/3 cup of fruit for each pitcher. Priya makes 3 pitchers and says she needs 2 cups of fruit. Do you agree?	**Yes. 3 x 2/3 = 2, so she needs 2 cups.**
4	A player has 75 game points and loses 28 points. Mateo says the player has 57 points left. Is Mateo correct?	**No. 75 - 28 = 47, so the player has 47 points left.**
5	Two notebooks cost $4.25 each. Nia says the total cost is $8.00. Is her claim correct?	**No. 2 x $4.25 = $8.50.**

PART 2 · APPLY IT

1. **Yes. They sell 199 key chains.** 11 x 16 = 176. Then 176 + 23 = 199.
2. **No. 48 tokens remain.** 3/5 of 180 is 108, and 180 - 108 = 72. Then 72 - 24 = 48.

CHALLENGE

Omar's argument is viable. 12 x 14 = 168, and 168 - 39 = 129 kittens remain. Kim subtracts 39 from each room instead of from the total.

Accept equivalent equations and clear written evidence. Students should state whether each claim is correct and connect their conclusion to accurate calculations.