LESSON MAKER PRO

Equation Detectives

Check both sides to find the truth.

GRADE 3 · MA.3.AR.2.2

MA.3.AR.2.2 "Determine and explain whether an equation involving multiplication or division is true or false."

NAME _____ DATE _____

CHECK BOTH SIDES

An equation has two sides. Find the value on each side, then compare them. If the values match, the equation is true. If they do not match, it is false.

WORKED EXAMPLE

$32 / 4 = 3 * 3$

1. Find the left side: 32 / 4 = 8.
2. Find the right side: 3 * 3 = 9.
3. Compare 8 and 9. They are not equal.

Answer: False

PRACTICE 6 problems

1 6 * 6 = 36. Is the equation true or false? Show the value of each side.

ANSWER _____

2 25 / 5 = 6. Is the equation true or false? Show the value of each side.

ANSWER _____

3 7 * 5 = 35. Is the equation true or false? Show the value of each side.

ANSWER _____

4 42 / 7 = 30 / 5. Is the equation true or false? Show the value of each side.

ANSWER _____

5 10 * 7 = 69. Is the equation true or false? Show the value of each side.

ANSWER _____

6 72 / 6 = 66 / 11. Is the equation true or false? Show the value of each side.

ANSWER _____

APPLY IT Show your work

1 At a game club, 5 teams have 7 players on each team. Leo says that 5 * 7 = 36. Is Leo's equation true or false? Explain.

WORK SPACE

ANSWER _____

2 A collector puts 55 trading cards equally into 5 binder pockets. Sam says that 55 / 5 = 11. Is Sam's equation true or false? Explain.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Which equation is false? Explain how you know. A. 6 * 7 = 42 B. 42 / 6 = 7 C. 42 / 7 = 5

WORK SPACE AND ANSWER

ANSWER KEY

Equation Detectives

GRADE 3 · MA.3.AR.2.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	6 * 6 = 36. Is the equation true or false? Show the value of each side.	**True. 36 = 36.**
2	25 / 5 = 6. Is the equation true or false? Show the value of each side.	**False. 5 does not equal 6.**
3	7 * 5 = 35. Is the equation true or false? Show the value of each side.	**True. 35 = 35.**
4	42 / 7 = 30 / 5. Is the equation true or false? Show the value of each side.	**True. 6 = 6.**
5	10 * 7 = 69. Is the equation true or false? Show the value of each side.	**False. 70 does not equal 69.**
6	72 / 6 = 66 / 11. Is the equation true or false? Show the value of each side.	**False. 72 / 6 = 12 and 66 / 11 = 6; 12 does not equal 6.**

PART 2 · APPLY IT

1. **False. 5 * 7 = 35, not 36.** Multiply 5 by 7 to find 35 players. Since 35 is not 36, the equation is false.
2. **True. 55 / 5 = 11.** Divide 55 by 5 to find 11 cards in each pocket. Both sides have a value of 11, so the equation is true.

CHALLENGE

C is false. 42 / 7 = 6, not 5.

Accept true or false with correct values for both sides. For explanations, accept words, equations, or calculations that clearly show why the two sides are equal or not equal.