LESSON MAKER PRO

Equation Detectives

Check each side, then decide.

GRADE 5 · MA.5.AR.2.3

MA.5.AR.2.3 "Determine and explain whether an equation involving any of the four operations is true or false."

NAME _____ DATE _____

CHECK BOTH SIDES

An equation is true when the value on the left side equals the value on the right side. Find each side's value, then compare the two values before you decide.

WORKED EXAMPLE

52 / 4 + 11 = 24

1. 52 / 4 = 13.
2. 13 + 11 = 24.
3. The left side is 24.
4. 24 equals 24, so the equation is true.

Answer: True

PRACTICE 6 problems

1 1. Is 38 + 27 = 65 true or false?

ANSWER _____

2 2. Is 84 - 39 = 46 true or false?

ANSWER _____

3 3. Is 9 * 8 = 70 true or false?

ANSWER _____

4 4. Is 96 / 12 = 8 true or false?

ANSWER _____

5 5. Is 45 + 18 = 70 true or false?

ANSWER _____

6 6. Is 144 / 12 - 5 = 7 true or false?

ANSWER _____

APPLY IT Show your work

1 A student has 125 game cards and puts them equally into 5 binders. The student writes 125 / 5 = 30. Is the equation true or false? Explain.

WORK SPACE

ANSWER _____

2 The robotics club sells 32 keychains for $6 each. A member writes 32 * 6 = 192 to find the money earned. Is the equation true or false? Explain.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Is 150 - 48 + 15 = 117 true or false? Explain your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Equation Detectives

GRADE 5 · MA.5.AR.2.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	1. Is 38 + 27 = 65 true or false?	**True**
2	2. Is 84 - 39 = 46 true or false?	**False, because 84 - 39 = 45.**
3	3. Is 9 * 8 = 70 true or false?	**False, because 9 * 8 = 72.**
4	4. Is 96 / 12 = 8 true or false?	**True**
5	5. Is 45 + 18 = 70 true or false?	**False, because 45 + 18 = 63.**
6	6. Is 144 / 12 - 5 = 7 true or false?	**True**

PART 2 · APPLY IT

1. **False.** 125 / 5 = 25, not 30. Divide 125 by 5 to find the number of cards in each binder. The result is 25, so the equation is false.
2. **True.** 32 * 6 = 192. Multiply 32 by 6. Both sides have a value of 192, so the equation is true.

CHALLENGE

True. 150 - 48 = 102, and 102 + 15 = 117.

Accept "true" or "false" with correct calculations. For explanations, accept any clear comparison showing the value of both sides.