



Recognizing proportional relationships

GRADE 7 MATH

Name _____

Date _____

Answer every item. Show the ratios you tested; state your conclusion in the box. One skill: **recognizing proportional relationships**.

WORKED EXAMPLE

A relationship is **proportional** when the ratio $y \div x$ is the **same for every pair**. That constant is **k**, the constant of proportionality, and the rule is $y = kx$. Two equivalent tests: every ratio matches, and the graph passes through **(0, 0)**. Growing steadily is **not** enough — $y = 2x + 3$ grows steadily and is not proportional.

1. A table pairs x with y : (2, 6), (3, 9), (5, 15), (8, 24). Is it proportional? Show the ratios.

FLUENCY

Show your thinking

Answer

2. A table pairs x with y : (1, 5), (2, 7), (3, 9), (4, 11). Is it proportional? Show the ratios.

APPLICATION

Show your thinking

Answer

3. The second table follows the rule $y = 2x + 3$. Use $x = 0$ to explain, in one sentence, why it cannot be proportional.

REASONING

Show your thinking

Answer

4. A table pairs x with y : (4, 2), (10, 5), (14, 7). Is it proportional? If so, give k and write the rule.

REASONING

Show your thinking

Answer