



Roots of Reason



Stuck? Scan
for the anchor
chart

Proportional or Not?

Name _____ Date _____ Correct _____ / 8

1 **Test the Table.** Divide y by x on every row and write each quotient in the dashed cell. If any quotient is different, the table is not proportional.

x	2	5	8
y	5	12.5	20
$y \div x$			

Proportional

Not

If it is proportional, $k =$ _____

x	1	2	3
y	5	7	9
$y \div x$			

Proportional

Not

If it is proportional, $k =$ _____

x	2	4	6	8	10
y	3	6	9	12	15
$y \div x$					

Proportional

Not

If it is proportional, $k =$ _____



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Test the Graph. *A proportional graph is a straight line through the origin. If you cannot see the origin, test points instead.*

Not

Not

Not

In Context. Check whether zero of one quantity means zero of the other.

Not

Not



Roots of Reason

Proportional or Not?

1 Test the Table

x	2	5	8
y	5	12.5	20
$y \div x$	2.5	2.5	2.5

Proportional

Not

If it is proportional, $k = \underline{2.5}$

2.

x	1	2	3
y	5	7	9
$y \div x$	5	3.5	3

Proportional

Not

three different quotients. This table comes from $y = 2x + 3$

3.

x	2	4	6	8	10
y	3	6	9	12	15
$y \div x$	1.5	1.5	1.5	1.5	1.5

Proportional

Not

If it is proportional, $k = \underline{1.5}$



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2 Test the Graph

4. **Proportional**

because *it is straight and it passes through (0, 0)*

5. **Not**

because *it is straight but starts above zero. Linear is not enough*

6. **Proportional**

because $10 \div 4 = 15 \div 6 = 20 \div 8 = 2.5$. *The quotient test works even when the origin is off screen*

3 In Context

7. A climbing gym charges \$12 to join, then \$6 per visit.

Not

*Zero visits still costs \$12, so it is not proportional. Cost $\div$ visits keeps changing:
18, 12, 10...*

8. Tomatoes cost \$2.50 per pound, any amount.

Proportional

Zero pounds costs zero, and every pound adds the same \$2.50. Cost $\div$ pounds is always 2.5.