

Grade 8 - Proportional Relationships and Slope - Test

Common Core 8.EE.B.5 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This 20-point test checks proportional relationships, unit rates and slope on graphs, tables and equations (Common Core 8.EE.B.5). Work alone, show every step, and write each final answer clearly. You have 45 minutes. Calculators are not needed unless a question says so.

About this test

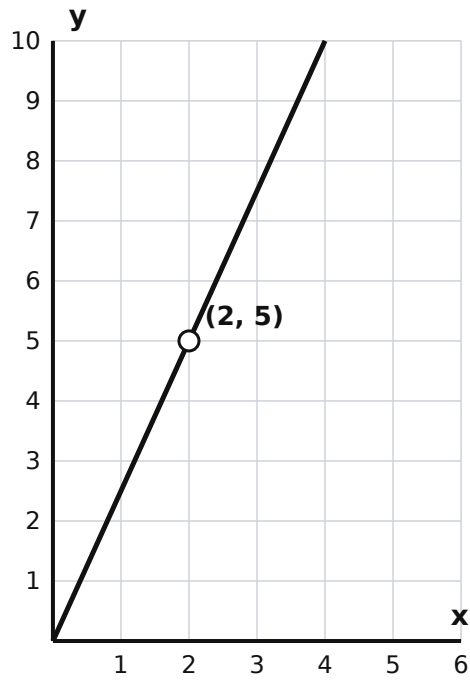
- Grade: Grade 8
- Chapter: Proportional Relationships and Slope
- Standards: 8.EE.B.5
- Time: 45 minutes
- Total: 20 points

Question 1 - Table and rate [2 pts]

x	y
2	7
4	14
6	21
8	28

Is the relationship proportional? If so, give the equation.

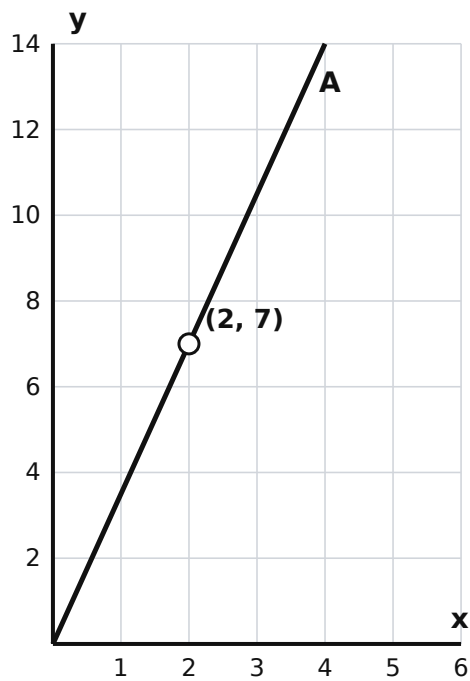
Question 2 - Slope from a graph [3 pts]



Line through the origin.

Find the slope of the line and write its equation. Then find y when $x = 10$.

Question 3 - Compare two relationships [3 pts]



Relationship A.

Relationship A is shown by the graph. Relationship B is $y = 3x$. Find the unit rate of each.

Which has the greater rate?

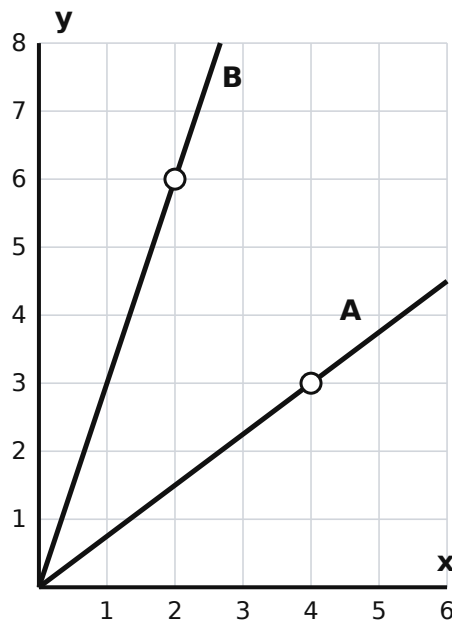
Question 4 - Grocery price [2 pts]

Four pounds of grapes cost \\$9.40. Write an equation for the cost c of p pounds and find the cost of 7 pounds.

Question 5 - Is it proportional? [2 pts]

A gym charges a \\$20 sign-up fee plus \\$10 per month. Is the total cost proportional to the number of months? Explain.

Question 6 - Two slopes [2 pts]



Lines A and B.

Find the slope of each line.

Question 7 - Walking speeds [3 pts]

Maya walks $y = 3.2x$ miles in x hours. Ethan walks 9 miles in 3 hours. Who walks faster? By how many miles per hour?

Question 8 - Find the point [3 pts]

The line $y = \frac{2}{3}x$ passes through $(9, a)$ and $(b, 8)$. Find a and b .