

Algebra 1 - Slope and Rate of Change - Test

Common Core F-IF.B.4, F-IF.B.6, F-LE.A.1b · maths-pdf.fr/en/

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

This test checks slope and rate of change for Common Core F-IF.B.6, F-IF.B.4, and F-LE.A.1b. It has 9 questions worth 20 points in all, and you have 45 minutes. Write clear steps, because points are awarded for method as well as for the final answer. Leave a few minutes to review.

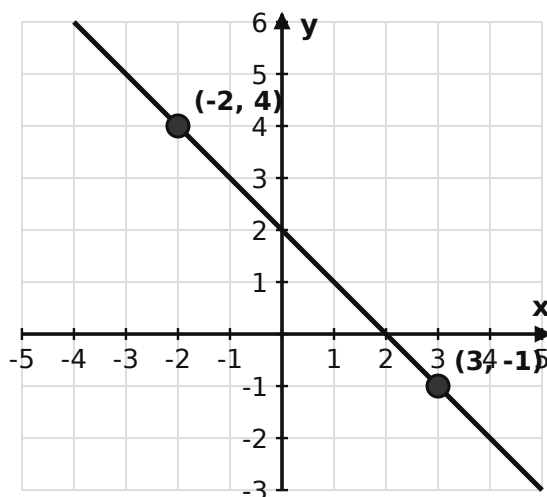
About this test

- Grade: Algebra 1
- Chapter: Slope and Rate of Change
- Standards: F-IF.B.4, F-IF.B.6, F-LE.A.1b
- Time: 45 minutes
- Total: 20 points

Question 1 - Slope of two points [2 pts]

Find the slope of the line through $(-3, 4)$ and $(5, -2)$. State whether the line rises or falls from left to right.

Question 2 - Slope from a graph [2 pts]



Line for question 2.

Find the slope of the line shown.

Question 3 - Slope from a table [2 pts]

The table shows a linear function: $(1,10), (3,4), (5,-2), (7,-8)$. Find its slope.

Question 4 - Missing coordinate [2 pts]

The slope of the line through $(-4,1)$ and $(4,y)$ is $\frac{3}{4}$. Find y .

Question 5 - Gas tank rate [2 pts]

Miles driven	Gallons left
0	12
100	8
200	4

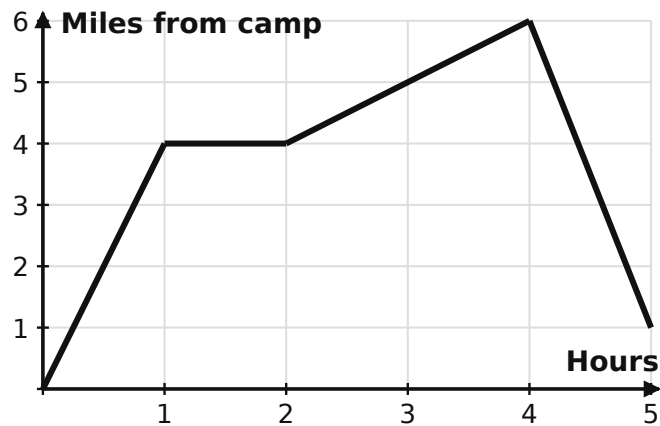
Gas in a tank.

Find the rate of change of the gas in the tank and explain what it means.

Question 6 - Average rate of change [2 pts]

A bike's distance from home in miles is modeled by $d(t) = t^2 + 3t$, where t is in hours. Find the average speed from $t = 2$ to $t = 6$.

Question 7 - Canoe trip [3 pts]



A canoe trip.

The graph shows a canoe trip.

- On which interval is the canoe not moving? (1 point)
- Find the rate of change from hour 2 to hour 4. (1 point)
- Find the rate of change from hour 4 to hour 5 and explain its sign. (1 point)

Question 8 - Compare rates [3 pts]

Hours	Ethan's miles
2	7
4	14
6	21

Ethan's walk.

Ethan's walk is shown in the table. Priya walks according to $d = 3.2t$ miles after t hours.

- Find Ethan's speed. (1 point)
- State Priya's speed. (1 point)
- Who walks faster, and by how much? (1 point)

Question 9 - Interpret an equation [2 pts]

A gym charges $y = 45 + 12x$ dollars for x months. Interpret the number 12 and the number 45 in this context.