

Independent Practice

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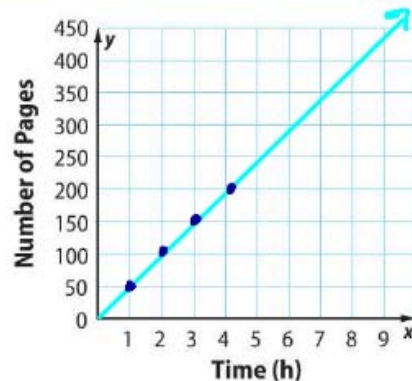


- 1 The table shows the number of pages Adriano read in x hours. Graph the data. Then find the slope of the line. Explain what the slope represents. (Example 1)

Time (h)	1	2	3	4
Number of pages	50	100	150	200

SLOPE = 50

ADRIANO READS 50 PAGES PER HOUR.

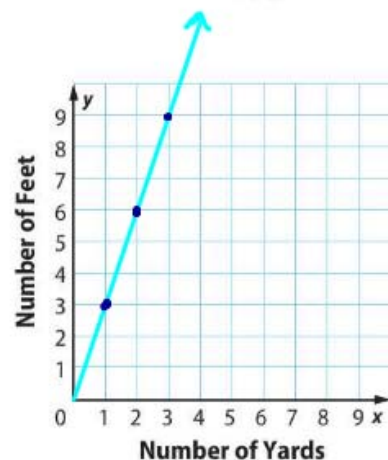


2. Graph the data. Find the numerical value of the slope and interpret it in words. (Example 2)

Number of Yards	1	2	3
Number of Feet	3	6	9

SLOPE = 3

THERE ARE 3 FEET PER YARD.



- 3 The graph shows the average speed of two cars on the highway.

a. What does $(2, 120)$ represent? *120 MILES TRAVELED IN 2 HOURS.*

b. What does $(1.5, 67.5)$ represent? *67.5 MILES TRAVELED IN 1.5 HOURS.*

c. What does the ratio of the y -coordinate to the x -coordinate for each pair of points on the graph represent?

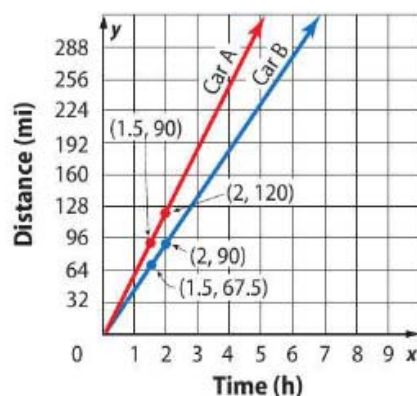
THE NUMBER OF MILES TRAVELED FOR A CERTAIN AMOUNT OF TIME.

d. What does the slope of each line represent?

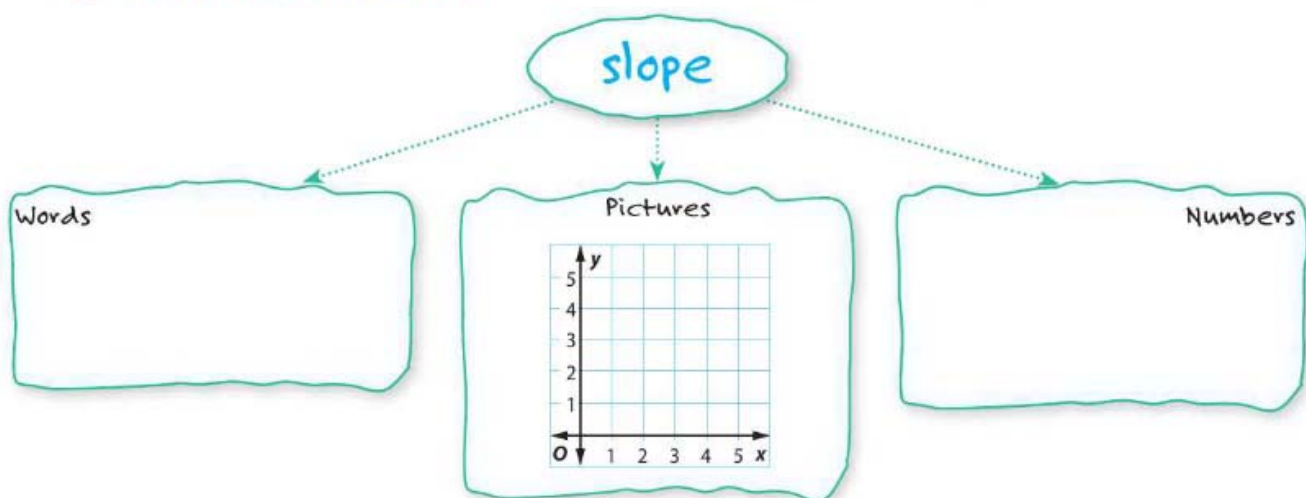
THE RATIO REPRESENTS THE NUMBER OF MILES PER HOUR.

e. Which car is traveling faster? How can you tell from the graph?

CAR A IS TRAVELING FASTER. YOU CAN TELL FROM THE SLOPE OF THE LINES. THE STEEPER SLOPE SHOWS THAT CAR A IS TRAVELING FASTER.



4. **CCSS Multiple Representations** Complete the graphic organizer on slope.



H.O.T. Problems Higher Order Thinking

5. **CCSS Find The Error** Marisol is finding the slope of the line containing the points (3, 7) and (5, 10). Find her mistake and correct it.

MARISOL ACCIDENTLY
WROTE $\frac{\Delta X}{\Delta Y}$ INSTEAD OF
 $\frac{\Delta Y}{\Delta X}$

The slope between the two points (3, 7) and (5, 10) is found like this:
slope = $\frac{\text{rise}}{\text{run}} = \frac{5-3}{10-7} = \frac{2}{3}$



6. **CCSS Persevere with Problems** Kaya is saving money at a rate of \$30 per month. Edgardo is saving money at a rate of \$35 per month. They both started saving at the same time. If you were to create a table of values and graph each function, what would be the slope of each graph?

7. **CCSS Reason Inductively** Without graphing, determine whether A(5, 1), B(1, 0), and C(3,3) lie on the same line. Explain your reasoning.

WE KNOW THESE POINTS ARE NOT ON THE SAME LINE BECAUSE THE SLOPE OF \overline{AB} IS NOT THE SAME AS THE SLOPE OF \overline{BC}

$$\text{SLOPE } \overline{AB} = \frac{\Delta Y}{\Delta X} = \frac{1-0}{5-1} = \frac{1}{4}$$

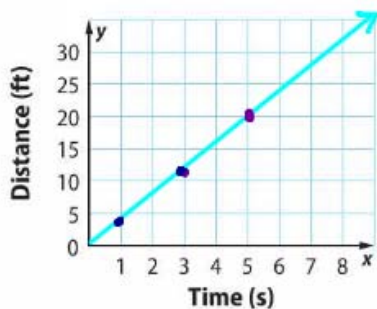
$$\text{SLOPE } \overline{BC} = \frac{\Delta Y}{\Delta X} = \frac{0-3}{1-3} = \frac{-3}{-2} = \frac{3}{2}$$

8. **CCSS Model with Mathematics** Name two points on a line that has a slope of $\frac{5}{8}$.

15. Two weeks ago, Audrey earned \$84 for 7 hours of work. This week, she earned \$132 for 11 hours of work. Find the numerical value of the slope of the line that represents Audrey's earnings. **(7, 84)**
(11, 132)
AUDREY EARNED \$12 PER HOUR.

$$\frac{\Delta Y}{\Delta X} = \frac{132 - 84}{11 - 7} = \frac{48}{4} = \frac{12}{1} = 12$$

16. The ordered pairs (1, 4), (3, 12), and (5, 20) represent the distance y that Jairo walks after x seconds. Plot the ordered pairs on the coordinate plane and draw a line through the points.



Find the slope of the line and explain what the slope represents.

SLOPE = 4 JAIRO WALKS 4 FEET PER SECOND.



Common Core Spiral Review

Determine if each situation is proportional. Explain your reasoning. 7.RP.2

17. Taxi cab passengers are charged \$2.50 upon entering a cab. They are then charged \$1.00 for every mile traveled.

NOT PROPORTIONAL BECAUSE PASSENGERS PAY THE SAME \$2.50 CHARGE NO MATTER HOW FAR THEY TRAVEL.

18. A restaurant charges \$5 for one sandwich, \$9.90 for two sandwiches, and \$14.25 for three sandwiches.

NOT PROPORTIONAL $\frac{5}{1} \neq \frac{9.90}{2}$

19.

Tickets Purchased	1	2	3	4
Cost (\$)	7.50	15	22.50	30

20.

Cups of Flour	3	6	9	12
Cups of Sugar	2	4	6	8