LESSON MAKER PRO

Slope in Action

Graph the relationship, then read its rate.

GRADE 8 · 8.AT.A.1.a

8.AT.A.1.a "Graph proportional relationships and interpret the unit rate as the slope of the graph."

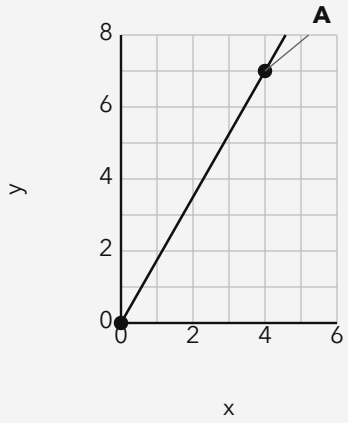
NAME _____ DATE _____

THE BIG IDEA

A proportional relationship graphs as a straight line through (0,0). The slope is its unit rate: divide the rise in y by the run in x.

WORKED EXAMPLE

What unit rate does the graph show?



1. From (0,0) to A, the rise is 7.
2. The run is 4.
3. Slope = rise/run = 7/4.

Answer: 7/4 y-units per x-unit

PRACTICE 4 problems

1 For y = 4x, name two points to plot and give the slope.

ANSWER _____

2 A proportional line passes through (2,10). Give its unit rate and equation.

ANSWER _____

3 A proportional line passes through (5,2). What is its slope?

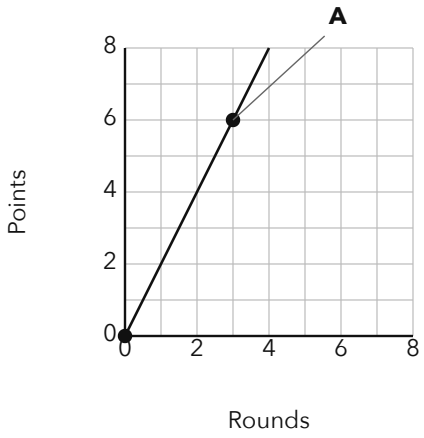
ANSWER _____

4 A proportional line has a unit rate of 1/2. Name two points to plot besides (0,0).

ANSWER _____

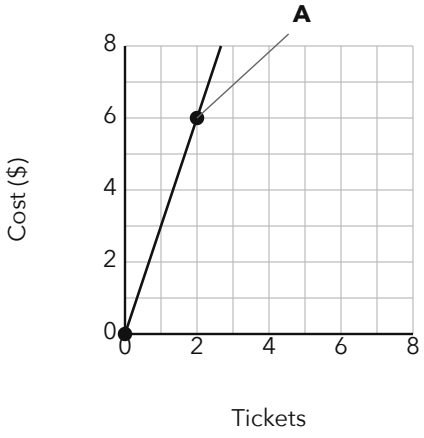
APPLY IT Show your work

1 This graph shows points earned after game rounds. What is the unit rate, and what does the slope mean?



ANSWER _____

2 This graph shows the cost of festival tickets. What is the price per ticket? At this rate, what would 5 tickets cost?



ANSWER _____

CHALLENGE One step up

Plan A follows y = 5x. Plan B follows y = 2x. Which graph is steeper? At x = 6, how much greater is its y-value? Explain.

WORK SPACE AND ANSWER

ANSWER KEY

Slope in Action

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	For y = 4x, name two points to plot and give the slope.	**Possible points: (0,0) and (1,4). Slope: 4.**
2	A proportional line passes through (2,10). Give its unit rate and equation.	**Unit rate: 5. Equation: y = 5x.**
3	A proportional line passes through (5,2). What is its slope?	**2/5**
4	A proportional line has a unit rate of 1/2. Name two points to plot besides (0,0).	**Possible points: (2,1) and (4,2).**

PART 2 · APPLY IT

1. **2 points per round. The score increases by 2 points each round.** From the origin to A, divide the rise of 6 points by the run of 3 rounds.
2. **$3 per ticket; 5 tickets cost $15.** The slope is 6/2 = 3 dollars per ticket. Multiply 5 by 3 to find the cost.

CHALLENGE

Plan A is steeper because its slope, 5, is greater than 2. At x = 6, its y-value is 30, which is 18 greater than Plan B's y-value of 12.

Accept any correct points for Problems 1 and 4. Equivalent fractions and clear descriptions of the unit rates are acceptable.