LESSON MAKER PRO

Rates on a Grid

Connect unit rates, ordered pairs, and graphs.

GRADE 6 · 6.AT.A.3.b

6.AT.A.3.b "Plot the pairs of values on the Coordinate Plane (in quadrant 1) to represent unit rates and make connections between representations."

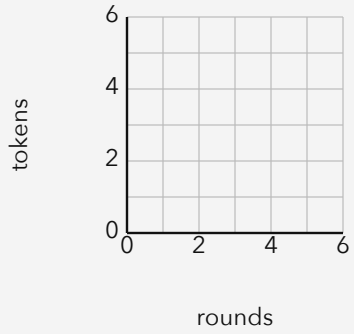
NAME _____ DATE _____

THE BIG IDEA

Put the number of groups on the x-axis and the total on the y-axis. Multiply each x-value by the unit rate to find its y-value. Plot the pair as (x, y).

WORKED EXAMPLE

A game gives 3 tokens per round. Plot points for 1 and 2 rounds. What is the unit rate?



1. 1 round: 1 × 3 = 3 tokens.
2. 2 rounds: 2 × 3 = 6 tokens.
3. Plot (1, 3) and (2, 6).

Answer: 3 tokens per round

PRACTICE 4 problems

1 Each sticker costs 2 tickets. Write pairs for 1 and 4 stickers.

ANSWER _____

2 The rule is y = 5x. Write pairs for x = 1 and x = 2.

ANSWER _____

3 A player earns 4 coins per win. Write pairs for 1 and 2 wins.

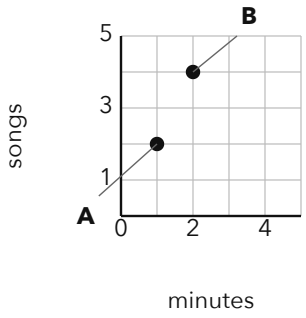
ANSWER _____

4 The pairs (1, 7) and (2, 14) show points earned after each round. What is the unit rate?

ANSWER _____

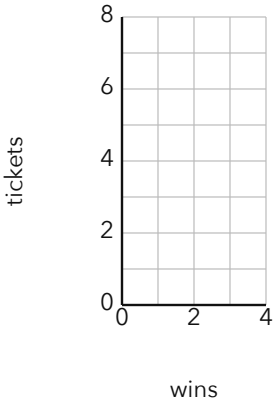
APPLY IT Show your work

1 Maya downloads songs at a steady rate. What rate does her graph show?



ANSWER _____

2 An arcade game awards 4 tickets per win. Plot points for 1 and 2 wins on the grid. State the unit rate.



ANSWER _____

CHALLENGE One step up

One y-value in the table is wrong. Which value should change, and what should it be? Explain.

TICKETS EARNED

Wins (x)	Tickets (y)
1	2
2	4
4	9

WORK SPACE AND ANSWER

ANSWER KEY

Rates on a Grid

GRADE 6 · 6.AT.A.3.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Each sticker costs 2 tickets. Write pairs for 1 and 4 stickers.	**(1, 2) and (4, 8)**
2	The rule is y = 5x. Write pairs for x = 1 and x = 2.	**(1, 5) and (2, 10)**
3	A player earns 4 coins per win. Write pairs for 1 and 2 wins.	**(1, 4) and (2, 8)**
4	The pairs (1, 7) and (2, 14) show points earned after each round. What is the unit rate?	**7 points per round**

PART 2 · APPLY IT

1. **2 songs per minute** Point A shows 2 songs in 1 minute, so the unit rate is 2 songs per minute.
2. **(1, 4) and (2, 8); 4 tickets per win** Multiply each number of wins by 4 to find the ticket totals. Plot (1, 4) and (2, 8).

CHALLENGE

Change 9 to 8. The first two rows show 2 tickets per win, so 4 wins earn 4 × 2 = 8 tickets.

Ordered pairs use the first quantity as x and the total as y. For the challenge, accept any explanation that uses the constant rate of 2 tickets per win.