Name_____ Date_____ Period_____

LESSON 3-4 · SESSION 1 · PRACTICE · FORM A

Graphing Ratios on the Coordinate Plane

Learning target – I can turn a ratio into ordered pairs and plot them on a coordinate plane. · 6.RP.A.3a

REMEMBER

- An **ordered pair** (x, y) names one point. Go **across** x first, then **up** y.
- Each column of a ratio table is one point. Points from equivalent ratios form a **straight line** through **(0, 0)**.
- To test a point, multiply its x by the rate. Do you get its y?

WORKED EXAMPLE

Each tray holds 8 muffins (x = trays, y = muffins). Write and plot three points.

Step 1 Table: 1 tray = 8, 2 trays = 16, 3 trays = 24.

Step 2 Pairs: (1, 8), (2, 16), (3, 24).

Step 3 Plot each pair from (0, 0): across x, then up y.

Answer **The points lie on one straight line through (0, 0)**

WORDS **coordinate plane** *(plano de coordenadas)* · **ordered pair** *(par ordenado)* · **origin** *(origen)*

PRACTICE

show your work · label units

1. Each bag holds 6 soccer balls (x = bags, y = balls). Write the ordered pair for:

a. 1 bag _____

b. 3 bags _____

c. 4 bags _____

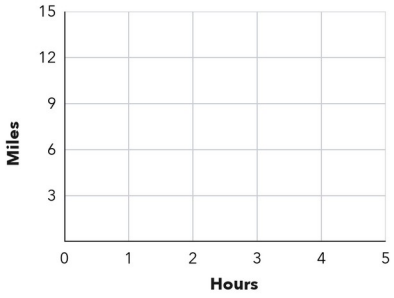
d. 6 bags _____

2. **Hiking Trail.** Hikers climb 3 miles every hour (x = hours, y = miles).

a. Complete: (1, 3), (2, ___), (3, ___), (4, ___)

b. Plot the points. Draw a line through (0, 0).

c. What point shows 6 hours? _____



3. File Downloads. A computer downloads 5 GB every 2 minutes (x = minutes, y = GB).

Hint *10 minutes is 5 groups of 2 minutes.*

a. Complete: (2, 5), (4, 10), (6, ___)

b. GB in 10 minutes: _____ GB

Show your work.

4. Street Trees. A crew plants 7 trees on every block (x = blocks, y = trees).

a. Complete: (1, 7), (2, ___), (3, ___)

b. Point for 6 blocks: _____

Show your work.

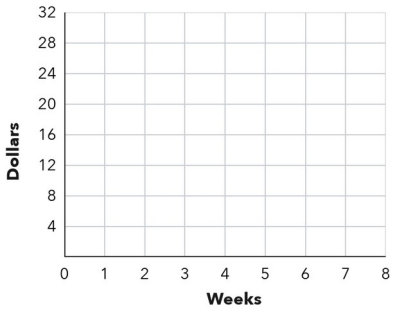
5. Allowance Savings. Maya saves $4 each week (x = weeks, y = dollars).

Hint *Multiply each number of weeks by 4.*

a. Complete: (1, 4), (2, ___), (3, ___), (5, ___)

b. Find y for the point (8, y). _____ dollars

c. Plot your points and label the point for 8 weeks.



6. Poster Printing. A printer prints 8 posters each minute (x = minutes, y = posters).

Hint *The equation is y = (rate) × x.*

a. Write the equation: y = _____

b. What does (0, 0) mean here? _____

7. Scooter Range. A scooter goes 15 miles on each battery charge (x = charges, y = miles). Which point is on its graph: (2, 25), (3, 45) or (4, 55)?

Hint *Multiply each x by 15. Does it match y?*

Show your work.

Point_____

8. Two Stores. Store A sells notebooks at 3 for $6. Store B sells them at 4 for $10. Graph x = notebooks, y = cost.

a. Cost of 12 notebooks at each store: _____

b. Whose line is steeper? What does steeper mean here? _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Chloe's Work. A car travels 50 miles each hour (x = hours, y = miles). Chloe plotted the points (50, 1) and (100, 2). Explain her mistake and write the correct points.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. In the ordered pair (4, 12), the number 4 is the –

A x-value **B** y-value **C** unit rate **D** origin

11. The ratio of x to y is 1 : 6. Which ordered pair has x = 3?

A (3, 9) **B** (3, 18) **C** (18, 3) **D** (6, 3)

SELF-CHECK CODE

find your answer · copy its letter into that problem's box · spell a math word

32 I	(3, 45) N	(6, 36) O	25 I	(36, 6) Q	50 X	(6, 18) R	(6, 42) G	(45, 3) Z

#1d	#2c	#3b	#4b	#5b	#7

CHECK YOURSELF	□ I can do this on my own	□ I need a little help	□ I have a question about #___