

Ratio and Rate Problem Solving

Lesson 3-7

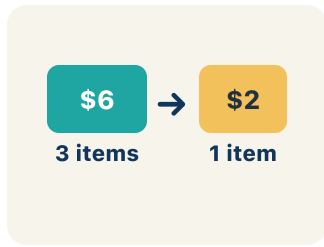
Name: _____

Date: _____

Class: _____

Key Vocabulary Level 2 Standard

Picture first, then the word, then a plain-language meaning. Say each word out loud.



\$12 for 4 pounds → dollars per pound

Rate

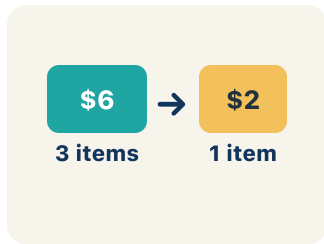
Write the definition:



$\$12 \div 4 = \3 per 1 pound

Unit rate

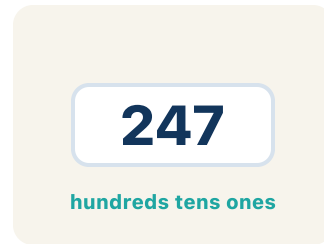
Write the definition:



60 miles per hour, \$5 per ticket

Per

Write the definition:



Set up → Plan → Solve → Check

Problem solving

Write the definition:

$$\frac{1}{2} = \frac{2}{4}$$

$$\frac{3}{5} = \frac{x}{20} \rightarrow x = 12$$

Proportion

Write the definition:

Guided Notes Level 2 Standard



WHAT WE'RE LEARNING TODAY

I can solve real-world rate problems by finding and using unit rates.



Fill in each blank as we go. Use the Word Bank to help you.



WORD BANK – FILL EACH BLANK WITH THE BEST WORD

Rate

Unit rate

Per

Problem solving

Proportion



Tap any word to see what it means and a picture.

1 A ratio comparing two quantities with different units is a

2 A rate for exactly one unit, like \$3 per 1 pound, is a .

3 The word that means 'for each' in a rate, like miles hour, is .

4 Using a plan and math steps to find an answer to a real situation is

5 An equation that two ratios are equal is a .



Watch & Try – Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.


 **I do – watch**


Follow each step as your teacher solves it.

Problem: A bakery makes 24 cookies in 3 batches. What is the unit rate of cookies per batch?

- A. 8 cookies per batch
- B. 3 cookies per batch
- C. 24 cookies per batch
- D. 6 cookies per batch

Step 1 Unit rate: $24 \text{ cookies} \div 3 \text{ batches} = 8 \text{ cookies per batch}$.

 **Answer:** A. 8 cookies per batch

 **We do – together**

Solve this one with your class using the same steps.


Problem: Apples cost \$5 for 4 pounds. What is the cost per pound?

- A. \$1.25
- B. \$0.80
- C. \$1.50
- D. \$4.00

Step 1 _____

Step 2 _____

Answer: _____

 **You do — your turn**

Now try one on your own. Show every step.

Problem: A cyclist rides 36 miles in 3 hours. At the same rate, how far will she ride in 5 hours?

- A. 60 miles
- B. 48 miles
- C. 72 miles
- D. 45 miles

Show your work:

Try It

Solve on your own. Check the answer key when you are done.

1. A line cook chops 8 carrots in 2 minutes. Working at the same steady rate, how many carrots can the cook chop in 7 minutes?

- A. 28 carrots
- B. 24 carrots
- C. 32 carrots
- D. 16 carrots

Show your work:

2. Level 2 Extension — Mixed review: A recipe uses 18 ounces of flour to make 3 loaves of bread. How many ounces of flour are needed to make 7 loaves at the same rate?

- A. 42 ounces
- B. 36 ounces
- C. 48 ounces
- D. 21 ounces

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A factory makes 240 widgets in 8 hours. Another factory makes 200 widgets in 5 hours. Which factory is faster? If both factories work together for 10 hours, how many total widgets would they produce?

Show your work:

Reflect — Exit Ticket

A printer prints 30 pages in 5 minutes. At this rate, how many pages will it print in 12 minutes?

- A. 72
- B. 60
- C. 36
- D. 42

Your answer:
