

Grade 7 · Unit Rates with Fractions · Worksheet

Common Core 7.RP.A.1 · mathovore.fr

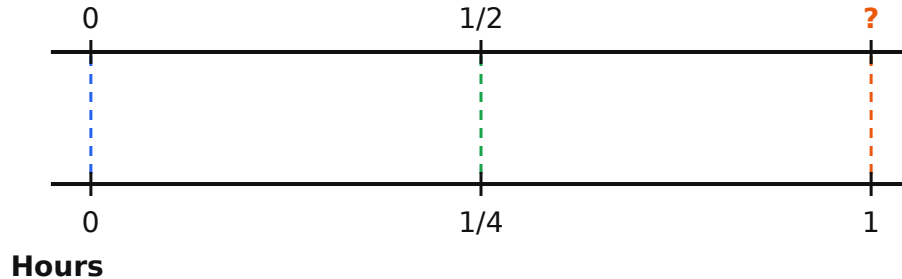
Name: _____ Date: ____/____/____ Score: _____

These twenty problems practice finding unit rates when the quantities are fractions, a skill from standard 7.RP.A.1. Divide fractions, work with speeds, prices, recipes and areas, and convert minutes to hours. The problems start with one complex fraction and finish with multi-step word problems. Write each answer with its units.

Grade 7 Common Core: 7.RP.A.1

Problem 1: Basic complex fraction

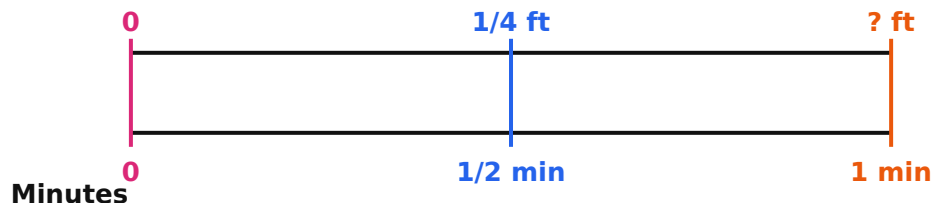
Maya walks $\frac{1}{2}$ mile in $\frac{1}{4}$ hour. Find her unit rate in miles per hour.



How many miles go with 1 hour?

Problem 2: Snail speed

A snail crawls $\frac{1}{4}$ foot in $\frac{1}{2}$ minute. Find its speed in feet per minute.



How many feet go with 1 minute?

Problem 3: Chapters per hour

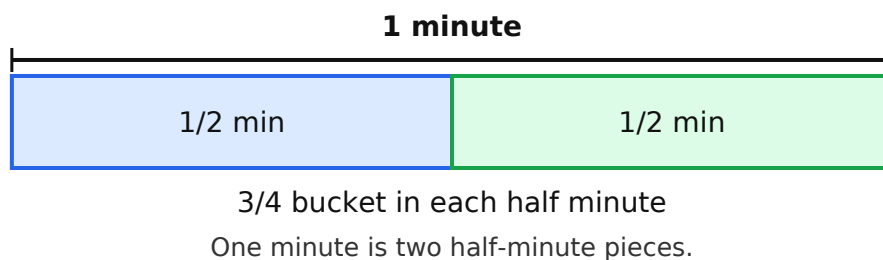
Jamal reads $\frac{2}{3}$ of a chapter in $\frac{1}{6}$ hour. How many chapters does he read per hour?

Problem 4: Pages per minute

A printer prints $\frac{3}{4}$ of a page in $\frac{1}{8}$ minute. How many pages does it print per minute?

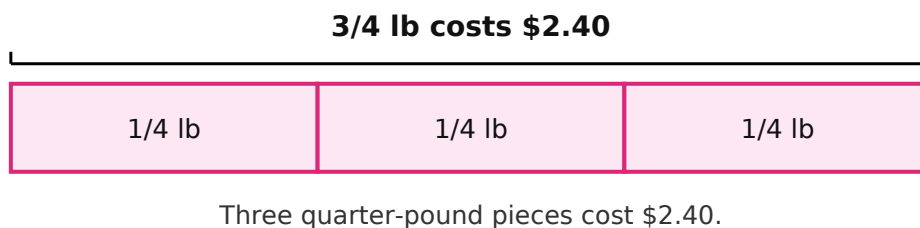
Problem 5: Buckets per minute

A hose fills $\frac{3}{4}$ of a bucket in $\frac{1}{2}$ minute. Find the unit rate in buckets per minute.



Problem 6: Price of grapes

At the farmers market, $\frac{3}{4}$ pound of grapes costs \$2.40. Find the cost per pound.



Problem 7: Bike speed

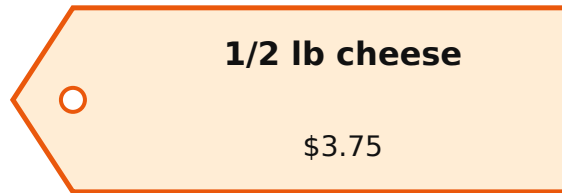
Sofia bikes $\frac{3}{4}$ mile in $\frac{1}{6}$ hour. Find her speed in miles per hour. Write the answer as a mixed number.

Problem 8: Cups of sugar

A recipe uses $\frac{5}{6}$ cup of sugar for $\frac{2}{3}$ of a batch. How much sugar is needed for 1 whole batch?

Problem 9: Cost per pound

At the farmers market, $\frac{1}{2}$ pound of cheese costs \$3.75. Find the cost per pound.



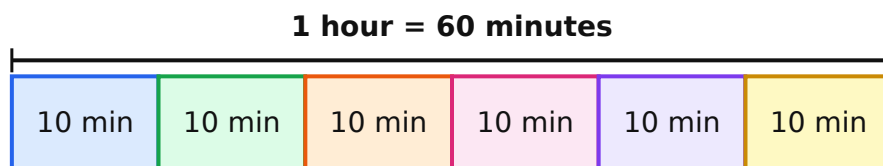
Price of half a pound.

Problem 10: Sealant coverage

A roofer covers $\frac{5}{6}$ square yard of roof with $\frac{1}{3}$ gallon of sealant. How many square yards does 1 gallon cover?

Problem 11: Different units

Ethan walks $\frac{1}{2}$ mile in 10 minutes. Find his speed in miles per hour.



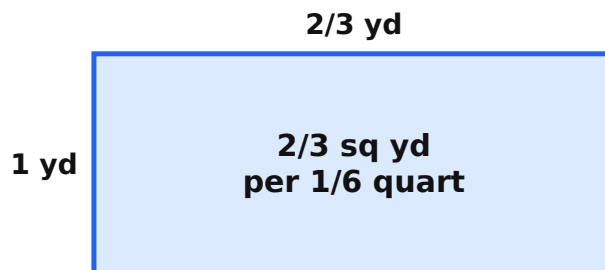
One hour holds six 10-minute pieces.

Problem 12: Walk in minutes

Noah walks $\frac{3}{4}$ mile in 12 minutes. Find his speed in miles per hour.

Problem 13: Painting area

A painter covers $\frac{2}{3}$ square yard of wall using $\frac{1}{6}$ quart of paint. How many square yards does 1 quart cover?



The area covered by 1/6 quart.

Problem 14: Better buy

Store A sells $\frac{2}{3}$ pound of coffee beans for \$8.00. Store B sells $\frac{3}{4}$ pound for \$8.25. Find the price per pound at each store. Which store has the lower price, and by how much per pound?

Problem 15: Faster plant

Priya's bamboo grows $\frac{3}{8}$ inch in $\frac{1}{4}$ week. Her neighbor's bamboo grows $\frac{5}{6}$ inch in $\frac{1}{2}$ week. Which plant grows faster, and by how many inches per week?

Problem 16: Garden hose

A garden hose delivers $2\frac{1}{2}$ gallons of water in $\frac{3}{4}$ minute. (a) Find the flow rate in gallons per minute. (b) How many gallons flow in 6 minutes?

Problem 17: Gas mileage

Diego's car travels $7\frac{1}{2}$ miles on $\frac{1}{4}$ gallon of gas. (a) Find the miles per gallon. (b) How far can the car go on 12 gallons?

Problem 18: Book club

Jamal reads $\frac{3}{4}$ of a chapter in $\frac{1}{2}$ hour. (a) How many chapters does he read per hour? (b) At this rate, how many hours does he need to read a book with 12 chapters?

Problem 19: Muffin batches

Mei's muffin recipe uses $\frac{3}{4}$ cup of oil for $\frac{1}{2}$ of a batch. (a) How much oil is needed for 1 whole batch? (b) How much oil is needed for $2\frac{1}{2}$ batches?

Batches	$\frac{1}{2}$	1	$2\frac{1}{2}$
Cups of oil	$\frac{3}{4}$	?	?

Fill in the missing amounts.

Problem 20: Scooter battery

Ethan's electric scooter uses $\frac{1}{5}$ of its battery to travel $3\frac{3}{4}$ miles. (a) How many miles can it travel on a full battery? (b) How far can it travel on $\frac{3}{5}$ of the battery?



$\frac{1}{5}$ of the battery: $3\frac{3}{4}$ miles

Figure for Problem 20.