

Grade 7 - Unit Rates with Fractions - Worksheet

Common Core 7.RP.A.1 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

These 20 problems practice unit rates when the quantities are fractions, including speeds, prices, and comparing rates (Common Core 7.RP.A.1). They start with the basic skill, move to different kinds of numbers and multistep work, and end with six word problems set in everyday situations such as shopping, sports, and travel.

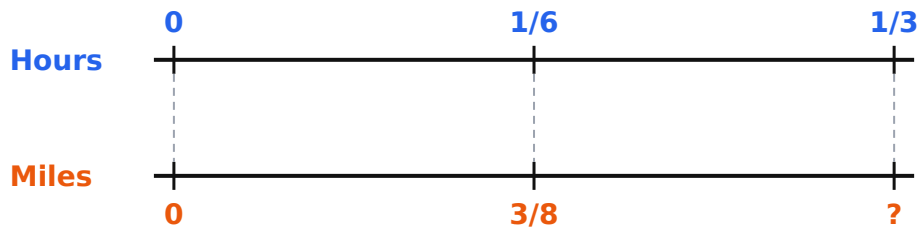
Show every step of your work, and use the answer key only after you have tried each problem.

Grade 7 · Common Core State Standards: **7.RP.A.1**

Exercise 1 - Words per minute

Sofia types 180 words in 3 minutes. Find the unit rate in words per minute.

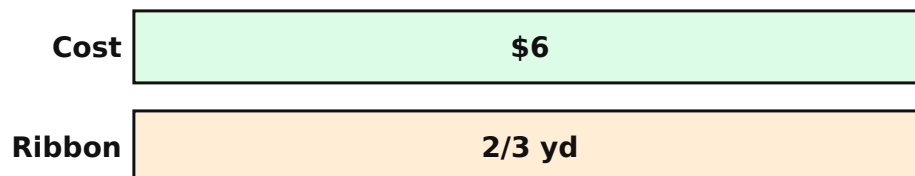
Exercise 2 - Walking speed



Noah's jog.

Noah jogs $\frac{3}{8}$ mile in $\frac{1}{6}$ hour around the track. Find his speed in miles per hour.

Exercise 3 - Sugar per batch



Price of ribbon.

Craft ribbon costs \$6 for $\frac{2}{3}$ yard. Find the cost in dollars per yard.

Exercise 4 - Hourly pay

Carlos earns \$27 for mowing lawns for $1\frac{1}{2}$ hours. Find his pay in dollars per hour.

Exercise 5 - Cycling speed

A cyclist rides $2\frac{1}{2}$ miles in $\frac{1}{4}$ hour. Find the speed in miles per hour.

Exercise 6 - Painting rate

Ethan paints $\frac{1}{3}$ of a wall in $\frac{1}{2}$ hour. Find the part of a wall he paints per hour.

Exercise 7 - Complex fraction

In a rainstorm, $\frac{7}{8}$ inch of rain falls in $\frac{1}{4}$ day. Write the rate as a complex fraction and simplify it to inches per day.

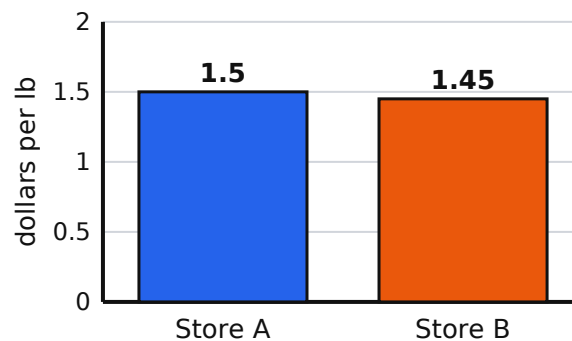
Exercise 8 - Cereal price

A 12-ounce box of cereal costs \$4.20. Find the price per ounce.

Exercise 9 - Garden hose

A hose fills $3\frac{1}{2}$ gallons in $1\frac{3}{4}$ minutes. Find the number of gallons per minute.

Exercise 10 - Better buy



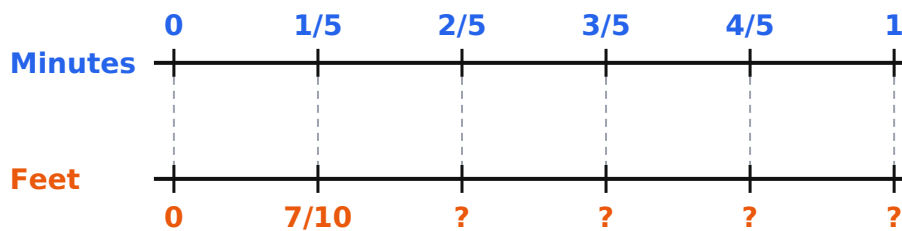
Price per pound at each store.

Store A sells 5 pounds of rice for \$7.50. Store B sells 8 pounds of the same rice for \$11.60. Find each price per pound and tell which store has the better buy.

Exercise 11 - Distance walked

Aisha hikes at $3\frac{1}{2}$ miles per hour. Find how far she hikes in $2\frac{1}{4}$ hours.

Exercise 12 - Snail speed



The caterpillar's climb.

A caterpillar crawls up a stem $\frac{7}{10}$ foot in $\frac{1}{5}$ minute. Find its climbing speed in feet per minute.

Exercise 13 - Flipped unit rate

Ethan paints $\frac{4}{5}$ of a fence panel in $\frac{1}{3}$ hour. Find the number of hours he needs for one whole panel.

Exercise 14 - Complete the table

Time (hours)	$\frac{1}{4}$	$\frac{1}{2}$	1	$3 \frac{1}{2}$
Distance (miles)	3			

Distance traveled by a go-kart.

The distance is proportional to the time. Find the unit rate and complete the table.

Exercise 15 - Who is faster?

Noah bikes $\frac{3}{4}$ mile in $\frac{1}{12}$ hour. Aisha bikes $\frac{2}{3}$ mile in $\frac{1}{10}$ hour. Find each speed and decide who is faster.

Exercise 16 - Road trip average

On a road trip, the Garcia family drives 45 miles in $\frac{3}{4}$ hour, then 60 miles in $1\frac{1}{4}$ hours. Find their average speed for the whole trip.

Exercise 17 - Filling a pool

Pool	1/5	1/5	1/5		
Time	1/2 hour				

Three fifths of the pool in half an hour.

A garden hose fills $\frac{3}{5}$ of a kiddie pool in $\frac{1}{2}$ hour. At this rate, find how many minutes it takes to fill the whole pool.

Exercise 18 - Fence painters

	Maya	Liam
Fence painted	$\frac{2}{3}$	$\frac{3}{4}$
Time (hours)	$1\frac{1}{3}$	$1\frac{1}{2}$

Painting data.

Maya paints $\frac{2}{3}$ of a fence in $1\frac{1}{3}$ hours. Liam paints $\frac{3}{4}$ of a fence in $1\frac{1}{2}$ hours. Compare their rates.

Exercise 19 - Gas mileage

The Rivera family's car uses $4\frac{1}{2}$ gallons of gas to go 130.5 miles. Find the miles per gallon. Then find the gallons needed for a 348-mile trip.

Exercise 20 - Juice sizes

A school store sells juice in three sizes: 16 ounces for \$2.08, 24 ounces for \$2.88, and 32 ounces for \$4.16. Find the unit price of each size. Then find how much is saved by buying 96 ounces in the best size instead of the worst.