

LEARNING OBJECTIVE: We will solve problems that require us to find unit rates involving fractions (G7M1L7)

CONCEPT DEVELOPMENT:

Time to Remodel: You have decided to remodel your bathroom and you're putting tile on the floor. Your bathroom is rectangular and the floor measures 14 feet 8 inches long and 5 feet 6 inches wide. The tile you want to use costs \$5 each, and each tile covers $4\frac{2}{3}$ square feet. If you have \$100 to spend, can you purchase enough tile?

What I Know	What I Want to Find	How to Find it
Dimensions $14'8'' \times 5'6''$ $14\frac{2}{3} \times 5\frac{1}{2}$	Area	Multiply LxW
Area of 1 tile $4\frac{2}{3}$ sq.ft.	How many tiles would it take to cover floor.	Divide total area by area of 1 tile
Cost of 1 tile \$5.00	Total cost of tiles	Multiply \$x # of tiles.
Budget \$100.	Do I have enough \$	$100 = \text{cost of tiles}$

$80\frac{2}{3}$
sq.ft.

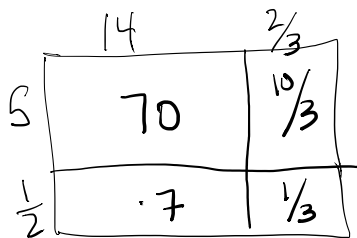
18 tiles

\$90

Yes!
\$10 left over for lunch

$14\frac{2}{3} \times 5\frac{1}{2} \neq 70\frac{1}{3}$

$14\frac{2}{3} \times 5\frac{1}{2}$



$77 + \frac{1}{3} = 80\frac{2}{3}$

$\frac{484}{3} \times \frac{11}{2} = \frac{484}{6} = 80\frac{2}{3}$

$80\frac{2}{3} \div 4\frac{2}{3}$

$\frac{484}{6} \div \frac{14}{3}$

$\frac{242}{3} \cdot \frac{3}{14} = \frac{121}{7} = 17\frac{2}{7}$ tiles

$$97 + 47 = 144$$

NAVEEN

$$\begin{aligned} 47 - 3 &= 44 \\ 97 + 3 &= 100 \\ \hline &144 \end{aligned}$$

CATHERINE

$$\begin{array}{r} 1 \\ 97 \\ + 47 \\ \hline 144 \end{array}$$

KAILA

$$\begin{aligned} 97 + 3 &= 100 \\ 47 + 3 &= 50 \\ \hline 150 - 6 &= 144 \end{aligned}$$

NORA

$$7 + 7 = 14$$

$$\begin{array}{r} 10 + 4 \\ + 90 \\ \hline 100 \\ 40 \\ \hline 140 \\ 4 \\ \hline 144 \end{array}$$

$$\underline{97 + 47}$$

ANGUST

$$\begin{aligned} 90 + 40 &= 130 \\ 7 + 7 &= 14 \\ \hline &144 \end{aligned}$$

$$1997 + 2989$$

$$4986$$

RUBY

$$\begin{array}{r} 1 \ 1 \ 1 \\ 2989 \\ 1997 \\ \hline 4986 \end{array}$$

$$4989$$

$$4886$$

CHRIS K

$$\begin{array}{r} 2989 \\ 1997 \\ \hline \end{array}$$

DIOGO

$$\begin{array}{r} 2000 \quad 900 \quad 80 \quad 9 \\ \hline 1000 \quad 900 \quad 90 \quad 7 \\ 3000 + 1800 + 170 + 16 \end{array}$$

$$4986$$

MALENA

$$1997 + 2989$$

$$2989 - 3 = 2986$$

$$\begin{array}{r} 1997 + 3 = 2000 \\ \hline 4986 \end{array}$$

PRACTICE:

Which car can travel further on 1 gallon of gas?

UNIT RATE: $\frac{\text{MILES}}{1 \text{ GALLON}}$

Car A: Travels $18\frac{2}{5}$ miles using 0.8 gallons of gas

Car B: Travels $17\frac{2}{5}$ miles using 0.75 gallons of gas

CAR A $\frac{92 \text{ MILES}}{5} \div \frac{8 \text{ GALLON}}{10} = \frac{92}{5} \cdot \frac{10}{8} = \frac{92}{4} = 23 \text{ MPG.}$

CAR B $\frac{87}{5} \div \frac{3}{4} = \frac{87}{5} \cdot \frac{4}{3} = \frac{116}{5} = 23\frac{1}{5} = 23.2 \text{ MPG}$

If $\frac{3}{4}$ lb. of candy cost \$20.50, how much would 1 lb. of candy cost?

$20\frac{1}{2} \div \frac{3}{4}$
 $\frac{41}{2} \div \frac{3}{4} = \frac{41}{2} \cdot \frac{4}{3} = \frac{82}{3} = 27\frac{1}{3} \text{ } \27.33
 $\frac{6.83}{2} = 3.415$

6.83	6.83	6.83	6.83
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 $\frac{1}{4} \text{ } 1 \text{ lb. } \27.33

Molly watches $2\frac{1}{2}$ movies in the car during a 6 hour and 20 minute trip to Los Angeles. If the movies are all the same length, how long is each movie?

$2\frac{1}{2}$ movies in $6\frac{1}{3}$ hrs.
 $6\frac{1}{3} \div 2\frac{1}{2} = \frac{19}{3} \div \frac{5}{2} = \frac{19}{3} \cdot \frac{2}{5} = \frac{38}{15} = 2\frac{8}{15}$
 2 hr. 32 min
 2 hr. 32 min
 1 lb = 6 hr. 20 min
 5 80 min.

NAME: _____

Math 7.1

Mr. Rogove

Date: _____

INDEPENDENT PRACTICE:

Cooking with the Whole cup

ACTIVATING PRIOR KNOWLEDGE:

We can calculate unit rates involving fractions:

One lap around a dirt track is $\frac{1}{3}$ of a mile. It takes Bryce $\frac{1}{9}$ of hour to ride a lap. How many miles can she ride in one hour?	A local bakery uses 1.75 cups of flour in each batch of cookies. If the bakery used 5.25 cups of flour, how many batches of cookies did they make?
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CLOSURE:

Last exercise could be closure...

TEACHER NOTES:

This aligns with Lesson 12 from Module 1.

Hand out IM-Cooking with the Whole Cup. This can be classwork.

Hand out Problem set—this will be homework.