

GRADE 7 · RATIOS & PROPORTIONAL RELATIONSHIPS · HOMEWORK

UNIT RATES WITH FRACTIONS

Today's goal: I can given a rate relationship between two quantities in a mathematical problem, calculate the unit rate, compute unit rates associated with ratios of fractions and given a rate relationship between two quantities in a real-world problem, calculate the unit rate.


Pick your peppers!

Everyone does Mild & Medium. Then climb as high as you can.


Mild

Tan the Turtle


Medium

Digit the Fox


Spicy

Blaze the Dragon

WATCH MR DJ SOLVE

$\frac{4}{7}$ km in $\frac{2}{7}$ hour. Km per hour?

1 $\frac{4}{7} \div \frac{2}{7} = \frac{4}{7} \times \frac{7}{2} = 2$. The 7s cancel.

Answer: **2 km/h**


REMEMBER

Unit rate = amount $\div$ number of units. Keep $\cdot$ Change $\cdot$ Flip to divide. Sense check first: dividing by a fraction less than 1 makes the answer bigger, dividing by a fraction bigger than 1 makes it smaller.


FAMILY CORNER

No need to remember this math yourself! Ask your student to teach you Mr DJ's example, then try the first Mild problem together.


MILD

Tan the Turtle: Slow and steady. Warm up!

1 $\frac{1}{2}$ mile in $\frac{1}{6}$ hour. Miles per hour?

Answer

2 $\frac{2}{3}$ cup per $\frac{1}{4}$ batch. Cups per batch?

Answer

**OOPS ALERT**

Careful on #1! The slip Mr DJ sees most: Answered $\frac{1}{12}$.

**MEDIUM**

Digit the Fox: Stretch your brain.

3 $\frac{1}{8}$ litre in $\frac{3}{4}$ minute. Litres per minute?

Answer

4 $\frac{9}{10}$ mile in $\frac{3}{10}$ hour. Miles per hour?

Answer

5 $\frac{1}{6}$ kg per $\frac{1}{2}$ bag. Kilograms per bag?

Answer

**SPICY**

Blaze the Dragon: Bring the heat!

6 $\frac{5}{8}$ mile in $\frac{5}{8}$ hour. Miles per hour? Explain why the answer is what it is.

Answer

- 7 Two taps: one fills $\frac{2}{3}$ gallon in $\frac{1}{3}$ hour, the other fills $\frac{1}{3}$ gallon in $\frac{2}{3}$ hour. Which is faster, and by how much?

Answer



How did this sheet feel? ☐ Easy for me ☐ Just right ☐ Made me think

Stuck? Watch Mr DJ explain it

Step-by-step video lessons on YouTube: [youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

Three new math puzzles every day, free:
puzzles.mathwithmrdj.com