Name_____ Date _____

Mr. Tallman

**Do Now**

1) At the busiest time of day at the grocery store, there were 32 customers in 4 lanes. Express this as a **unit rate** of customers per lane.

2) Evaluate: $\frac{3}{4} \div \frac{2}{5}$

3) Which is the better buy: 58 water bottles for $70 or 90 water bottles for $108? Show all work.

## Lesson #23 – Unit Rate with Complex Fractions

Fractions like $\frac{20}{\frac{1}{2}}$ and $\frac{\frac{1}{4}}{\frac{7}{10}}$ are called **complex fractions**.

Complex fractions are fractions with a numerator, denominator, or both that are also fractions. **COMPLEX FRACTIONS MUST BE SIMPLIFIED!!!!!**

Example 1) Simplify the following:

| | |
|---|---|
| A) $\frac{\frac{1}{4}}{2}$ | B) $\frac{\frac{1}{4}}{\frac{7}{10}}$ |

Example 2) Josiah can jog $1\frac{1}{3}$ miles in $\frac{1}{4}$ of an hour. Find his average speed in miles per hour.

Example 3) Matt is spreading mulch in his yard. He spreads $4\frac{2}{3}$ square yards in 2 hours. How many square yards can he mulch per hour?

**Now, You Try!**

**Simplify the following.**

| | |
|---|---|
| 4) $\dfrac{2}{\frac{2}{3}}$ | 5) $\dfrac{6}{\frac{1}{3}}$ |
| 6) $\dfrac{\frac{2}{3}}{7}$ | 7) $\dfrac{\frac{2}{4}}{2}$ |

8) One lap around a dirt track is $\frac{1}{3}$ mile. It takes Bryce $\frac{1}{9}$ of an hour to ride one lap. What is Bryce's unit rate around the track?

9) Allyson can walk $4\frac{1}{2}$ miles in $1\frac{1}{2}$ hours. Find her average speed in miles per hour.

10) During her last workout, Izzy ran $2\frac{1}{4}$ miles in 15 minutes. What is Izzy's unit rate?

11) One tank is filling at a rate at $\frac{3}{4}$ of a gallon per $\frac{2}{3}$ of a minute. A second tank is filling at a rate of $\frac{5}{8}$ of a gallon per $\frac{1}{2}$ of a minute. Which tank is filling faster? Show work and explain.