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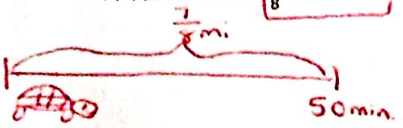
Example 2

A turtle walks $\frac{7}{8}$ of a mile in 50 minutes. What is the unit rate expressed in miles per hour?



$\frac{\frac{7}{8}\text{ mi} \div 50}{50\text{ min} \div 50} \rightarrow \frac{0.0175}{1\text{ min}} \times 60 = \frac{1.05\text{ mi}}{60\text{ min} / 1\text{ h}}$

- Find miles per minute FIRST
- 60 min = 1 hr

$\frac{7}{8} \div \frac{50}{1}$

$\frac{7}{8} \times \frac{1}{50} = \frac{7}{400} = 0.0175$

YOUR TURN

7) Izzy ran $6\frac{3}{4}$ miles in 45 minutes. Julia ran $3\frac{3}{4}$ miles in 25 minutes. Who ran at a faster pace?

- Find miles per minute for Izzy + Julia.

Izzy

$\frac{6\frac{3}{4}\text{ mi} \div 45}{45\text{ min} \div 45} \rightarrow \frac{0.15\text{ mi}}{1\text{ min}}$

$6\frac{3}{4} \div \frac{45}{1}$

$\frac{27}{4} \div \frac{45}{1}$

$\frac{27}{4} \times \frac{1}{45}$

$\frac{27}{180} = 0.15$

Julia

$\frac{3\frac{3}{4} \div 25}{25\text{ min} \div 25} \rightarrow \frac{0.15\text{ mi}}{1\text{ min}}$

$3\frac{3}{4} \div \frac{25}{1}$

$\frac{15}{4} \div \frac{25}{1}$

$\frac{15}{4} \times \frac{1}{25}$

$\frac{15}{100} = 0.15$

★ same pace

*2) For Anthony's birthday his mother is making cupcakes for his 12 friends. The recipe calls for $3\frac{1}{3}$ cups of flour. The recipe makes $2\frac{1}{2}$ dozen cupcakes. Anthony's mother only has 1 cup of flour. Is there enough flour for each of Anthony's friends to get a cupcake?

- Mother wants — Cupcakes for 12/1 dozen
  has — 1 cup of flour
- Recipe
  - $3\frac{1}{3}$ cups of flour
  - $2\frac{1}{2}$ dozen cc

→ Find cups per dozen.

$\frac{3\frac{1}{3}\text{ cups} \div 2\frac{1}{2}}{2\frac{1}{2}\text{ doz} \div 2\frac{1}{2}} \rightarrow \frac{1\frac{1}{3}\text{ cups}}{1\text{ doz}}$

$3\frac{1}{3} \div 2\frac{1}{2}$

$\frac{10}{3} \div \frac{5}{2}$

$\frac{10}{3} \times \frac{2}{5}$

$\frac{20}{15} = \frac{4}{3} = 1\frac{1}{3}$

★ Anthony's Mother does not have enough flour