

Math 7 - Unit 3

Day 4 - Convert MORE Unit Rates

Lesson Objectives:

- I can compute unit rates with like and different units.

To convert one unit into another unit, set up a multiplication problem with a unit ratio.



- $8 \cancel{\text{h}} \cdot \frac{1 \text{ day}}{24 \cancel{\text{hrs}}} = \frac{8}{24} \cdot \frac{1}{3} \text{ day}$
- $45 \cancel{\text{min}} \cdot \frac{60 \text{ sec}}{1 \cancel{\text{min}}} = 2700 \text{ sec}$
- $342 \cancel{\text{sec}} \cdot \frac{1 \cancel{\text{min}}}{60 \cancel{\text{sec}}} \cdot \frac{1 \text{ hr}}{60 \cancel{\text{min}}} = \frac{342}{3600} = 0.095 \text{ hr}$
- $2 \cancel{\text{days}} \cdot \frac{24 \cancel{\text{hours}}}{1 \cancel{\text{days}}} \cdot \frac{60 \cancel{\text{min}}}{1 \cancel{\text{hour}}} = 2,880 \text{ min}$

To convert one unit rate into another unit rate, set up a multiplication problem with at least one unit ratio.



- $8 \cancel{\text{ft}}/\cancel{\text{h}} \cdot \frac{1 \text{ yd}}{3 \cancel{\text{ft}}} \cdot \frac{24 \cancel{\text{hrs}}}{1 \text{ day}} = \frac{192}{3} = 64 \frac{\text{yds}}{\text{day}}$
- $45 \cancel{\text{yds}}/\cancel{\text{min}} \cdot \frac{60 \cancel{\text{min}}}{1 \text{ hr}} = 2700 \frac{\text{yds}}{\text{hr}}$
- $342 \cancel{\text{in}}/\cancel{\text{sec}} \cdot \frac{1 \cancel{\text{ft}}}{12 \cancel{\text{in}}} \cdot \frac{1 \text{ yd}}{3 \cancel{\text{ft}}} \cdot \frac{60 \cancel{\text{sec}}}{1 \text{ min}} = \frac{20520}{360} = 570 \frac{\text{yds}}{\text{min}}$
- $2 \cancel{\text{mi}}/\cancel{\text{day}} \cdot \frac{5280 \cancel{\text{ft}}}{1 \cancel{\text{mi}}} \cdot \frac{12 \cancel{\text{in}}}{1 \cancel{\text{ft}}} \cdot \frac{1 \text{ day}}{24 \cancel{\text{hours}}} = \frac{126720}{24} = 5280 \frac{\text{in}}{\text{hr}}$

Homework

Convert MORE Unit Rates WKS

* Individual Think Time *



What to do if you get stuck...

- Reread the problem. Did you write it down correctly?
- Reread your notes. Is there a problem similar that we did together in class?
- Find a problem similar in your book. Try this one to see if it helps.
- Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...

