

7th Grade
Dec 7, 2020

Today we will:
-complete examples
in binder as notes
-work on white
boards to practice
converting rates

HOMEWORK:

ALEKS due Monday
night 11:59 pm



*in binder as notes

Unit Conversions: Chapter 5 Lesson 4

Convert the following rates. Round to the nearest hundredth if needed.

1. Convert 35 miles ^{per} hour to km/h.

$$\frac{35 \text{ mi}}{1 \text{ hr}} \times \frac{1.609 \text{ km}}{1 \text{ mi}} = \frac{56.32 \text{ km}}{1 \text{ hr}}$$

2. Convert 10.5 feet/sec to yards/min.

$$\frac{10.5 \text{ ft}}{1 \text{ sec}} \times \frac{1 \text{ yd}}{3 \text{ ft}} \times \frac{60 \text{ sec}}{1 \text{ min}} = \frac{210 \text{ yd}}{\text{min}}$$

3. Convert 50 meters per second to km/h.

$$\frac{50 \text{ m}}{1 \text{ sec}} \times \frac{1 \text{ km}}{1000 \text{ m}} \times \frac{60 \text{ sec}}{1 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hr}} = \frac{180 \text{ km}}{1 \text{ hr}}$$

4. Convert 130 km/h to feet per second.

$$\frac{130 \text{ km}}{1 \text{ hr}} \times \frac{1000 \text{ m}}{1 \text{ km}} \times \frac{3.279 \text{ ft}}{1 \text{ m}} \times \frac{1 \text{ hr}}{3600 \text{ sec}} = 118.40 \text{ ft/sec}$$

5. Convert 10 mL per second to Liters per minute.

$$\frac{10 \text{ mL}}{1 \text{ s}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times \frac{60 \text{ s}}{1 \text{ min}} = \frac{0.6 \text{ L}}{\text{min}}$$

6. Convert 5 gallons an hour to cups per second.

$$\frac{5 \text{ gal}}{1 \text{ hr}} \times \frac{16 \text{ c}}{1 \text{ gal}} \times \frac{1 \text{ hr}}{3600 \text{ sec}} = \frac{0.02 \text{ c}}{\text{sec}}$$

3 3.4 cm/s = _____ m/min

$$\frac{3.4 \text{ cm}}{1 \text{ sec}} \times \frac{1 \text{ m}}{100 \text{ cm}} \times \frac{60 \text{ sec}}{1 \text{ min}} = \frac{2.04 \text{ m}}{1 \text{ min}}$$

5 76 mi = _____ ft

4 5.30 mi/gal = _____ km/L

$$\frac{5.30 \text{ mi}}{1 \text{ gal}} \times \frac{1.609 \text{ km}}{1 \text{ mi}} \times \frac{1 \text{ gal}}{3.785 \text{ L}} = \frac{2.25 \text{ km}}{\text{L}}$$

6 36 yd = _____ m

$$\frac{5.5 \text{ m}}{1 \text{ min}} = \underline{\hspace{2cm}} \text{ in/day}$$

$$\frac{5.5 \cancel{\text{ m}}}{1 \cancel{\text{ min}}} \times \frac{3.279 \cancel{\text{ ft}}}{1 \cancel{\text{ m}}} \times \frac{12 \cancel{\text{ m}}}{1 \cancel{\text{ ft}}} \times \frac{60 \cancel{\text{ min}}}{1 \cancel{\text{ hr}}} \times \frac{24 \cancel{\text{ hr}}}{1 \cancel{\text{ day}}}$$

$$311,636.16 \text{ in./day}$$

Measurement Conversions

Length	
Customary to Metric	Metric to Customary
1 in = 2.54 cm	1 cm = 0.394 in
1 ft = 0.305 m	1 m = 3.279 ft
1 yd = 0.914 m	1 m = 1.094 yd
1 mi = 1.609 km	1 km = 0.621 mi
1 m = 100 cm	
1 km = 1000 m	
1 mi = 5280 ft	
1 yd = 3 ft	

Capacity	
Customary to Metric	Metric to Customary
1 fl oz = 29.574 mL	1 mL = 0.034 fl oz
1 pt = 0.473 L	1 L = 2.114 pt
1 qt = 0.946 L	1 L = 1.057 qt
1 gal = 3.785 L	1 L = 0.264 gal
1 L = 1000 mL	
1 c = 8 fl oz	
1 pt = 2 c	
1 qt = 2 pt	
1 gal = 4 qt	

Mass or Weight	
Customary to Metric	Metric to Customary
1 oz = 28.350 g	1 g = 0.035 oz
1 lb = 0.454 kg	1 kg = 2.203 lb
1 kg = 1000 g	



