

## Dimensional Analysis- Multiple Conversions

Name \_\_\_\_\_ Class Period \_\_\_\_\_

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### Conversions Factors

$1 \text{ kg} = 2.2 \text{ lbs}$

$0.621 \text{ mi} = 1.00 \text{ km}$

$1 \text{ gal} = 3.79 \text{ L}$

$2.54 \text{ cm} = 1 \text{ in}$

$1 \text{ cc is } 1 \text{ cm}^3$

$20 \text{ drops} = 1 \text{ mL}$

$1 \text{ mL} = 1 \text{ cm}^3$

$264.2 \text{ gal} = 1 \text{ cubic meter}$

**Solve each problem using dimensional analysis. Every number must have a unit. Work must be shown. Conversion factors are given above.**

1. How many miles will a person run during a 10 kilometer race?
2. The moon is 250,000 miles away. How many feet is it from earth?
3. A family pool holds 10,000 gallons of water. How many cubic meters is this?
4. Sixty miles per hour is how many feet per second?
5. 14.8 minutes per 2 cups is how many seconds per pint?
6. 65 feet per 400 seconds is how many yards per hour?
7. 21 meters per 5 days is how many Kilometers per seconds?