**1.7 Classwork: Unit conversion**

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|---|---|---|
| 1 inch = 2.54 centimeters | 1 pound = 16 ounces | 1 quart = 2 pints |
| 1 meter = 39.37 inches | 1 pound = 0.454 kilogram | 1 gallon = 4 quarts |
| 1 mile = 5280 feet | 1 kilogram = 2.2 pounds | 1 gallon = 3.785 liters |
| 1 mile = 1760 yards | 1 ton = 2000 pounds | 1 liter = 0.264 gallon |
| 1 mile = 1.609 kilometers | 1 cup = 8 fluid ounces | 1 liter = 1000 cubic centime- |
| 1 kilometer = 0.62 mile | 1 pint = 2 cups | ters |

1. Use the table above to answer this question, How many...

    (a) centimeters in an inch

    (c) gallons in 1 liter

    (b) feet in a mile

    (d) pounds in a kilogram

2. Use your personal knowledge to answer, How many...

    (a) years in a century

    (b) hours in a day

3. Multiply by the appropriate conversion factor (fraction) to calculate the equivalent measure. Show work, including units in numerator and denominator.

    Example: Convert $T = 72$ hours to days.

    $$T = 72\,\text{hours} \times \frac{1\,\text{day}}{24\,\text{hours}} = 3\,\text{days}$$

    (a) Find the length in feet of a board with $L = 48$ inches.

    (b) Find the distance in miles of a race with $D = 10$ kilometers.

    (c) Find the volume in gallons of a tank with $V = 10$ liters.