

1. The English unit, the rod, is equal to 16.5 ft. What is this length expressed in meters?
2. A certain brand of coffee is offered for sale at \$7.26 for a 3-lb. can or \$5.42 for a 1-kg can- Which is the better buy?
3. A sprinter runs the 100-yd dash in 9.3 s. What would be his time for a 100-m run if he ran at the same rate?
4. The unit of length, the furlong, is used in horse racing. The units of length, the chain and the link, are used in surveying. There are 8 furlongs in 1 mi., 10 chains in 1 furlong, and 100 links in 1 chain. To three significant figures, what is the length of 1 link in inches?
5. An English unit of mass used in pharmaceutical work is the grain (gr). $15 \text{ gr} = 1.0 \text{ g}$. An aspirin tablet contains 5.0 gr of aspirin. A 145-lb person takes two aspirin tablets.
 - a) What is the quantity of aspirin taken, expressed in milligrams?
 - b) What is the dosage rate of the aspirin, expressed in milligrams of aspirin per kilogram of body weight?
6. A block of ice measures 24 in. x 36 in. x 18 in.
 - (a) What is the volume of this block in cubic meters?
 - (b) What is the total surface area of the block in square centimeters?

Equivalence statements.

$2.54 \text{ cm} = 1 \text{ in}$ (exactly)

$1.0000 \text{ kg} = 2.2046 \text{ pounds}$.

$1.0000 \text{ L} = 1.0567 \text{ quarts}$