

1. An average person contains 12 pints of blood. The density of blood is 1.060 g/cm^3 . How much does your blood weigh in pounds?
2. At a pet store I notice that an aquarium has an advertised size of 0.50 ft^3 . How many gallons of water will this aquarium hold?
3. A UCA weight lifter can lift 0.1 tons. How much can this student lift in kg?
4. A new car is advertised as having gas mileage of 19 miles/gallon? What is the gas mileage in km/L?
5. A particular anesthetic has a recommended dosage of 3.5 mg/kg of body weight. A 150 lb man is undergoing surgery. Calculate the number of milligrams (mg) of anesthetic you should administer him.
6. Codeine, a powerful narcotic, is often given after a surgical procedure. The morphine you obtain from the drug cabinet is 2.5 mg/mL . How many mL would you administer to a patient if they needed to receive only 1.75 mg of morphine?

Potentially useful conversion factors:

1 lb = 454 grams 1 inch = 2.54 cm 1 meter = 0.91 yards
1 quart = 0.946 liter 1 yard = 0.91 meters 1 lb = 454 g
1 in = 2.54 cm 1 L = 2.113 pints 1 L = 3.78 gallons 1 mile = 1760 yards