

Exercise 1.44

Indicate which of the following are exact numbers: (a) the mass of a 32-oz can of coffee, (b) the number of students in your chemistry class, (c) the temperature of the surface of the Sun, (d) the mass of a postage stamp, (e) the number of milliliters in a cubic meter of water, (f) the average height of NBA basketball players.

Solution

- (a) the mass of a 32-oz can of coffee - Approximate
- (b) the number of students in your chemistry class - Exact
- (c) the temperature of the surface of the Sun - Approximate
- (d) the mass of a postage stamp - Approximate
- (e) the number of milliliters in a cubic meter of water - Exact
- (f) the average height of NBA basketball players - Approximate

Measurements are involved with the approximate items, and they introduce error. The exact items can be calculated with exact conversion factors or counted (even if it takes a while).