

## Exercise 37

Indicate the SI base units or derived units that are appropriate for the following measurements:

- (a) the mass of the moon
- (b) the distance from Dallas to Oklahoma City
- (c) the speed of sound
- (d) the density of air
- (e) the temperature at which alcohol boils
- (f) the area of the state of Delaware
- (g) the volume of a flu shot or a measles vaccination

---

### Solution

The SI units for mass, length, time, and temperature are kilogram (kg), meter (m), second (s), and kelvin (K), respectively.

- (a) kilograms (kg)
- (b) meters (m)
- (c) meters per second (m/s)
- (d) kilograms per cubic meter ( $\text{kg}/\text{m}^3$ )
- (e) kelvins (K)
- (f) square meters ( $\text{m}^2$ )
- (g) cubic meters ( $\text{m}^3$ )