

## Exercise 36

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

- (a) the length of a marathon race (26 miles 385 yards)
- (b) the mass of an automobile
- (c) the volume of a swimming pool
- (d) the speed of an airplane
- (e) the density of gold
- (f) the area of a football field
- (g) the maximum temperature at the South Pole on April 1, 1913

---

### Solution

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

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