Poisson's Ratio.

When a long bar is stretched by a force along its length then its length increases and the radius decreases as shown in the figure.

Lateral strain: The ratio of change in radius to the original radius is called lateral strain.
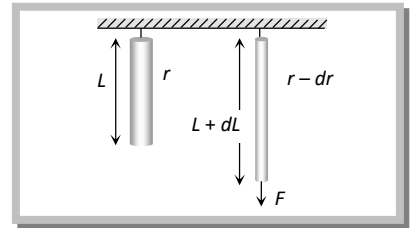
Longitudinal strain: The ratio of change in length to the original length is called longitudinal strain.

The ratio of lateral strain to longitudinal strain is called Poisson's ratio (σ).

i.e.
$$\sigma = \frac{\text{Lateral strain}}{\text{Longitudin al strain}}$$

$$\sigma = \frac{-dr/r}{dL/L}$$

Negative sign indicates that the radius of the bar decreases when it is stretched.

Poisson's ratio is a dimensionless and a unit less quantity.