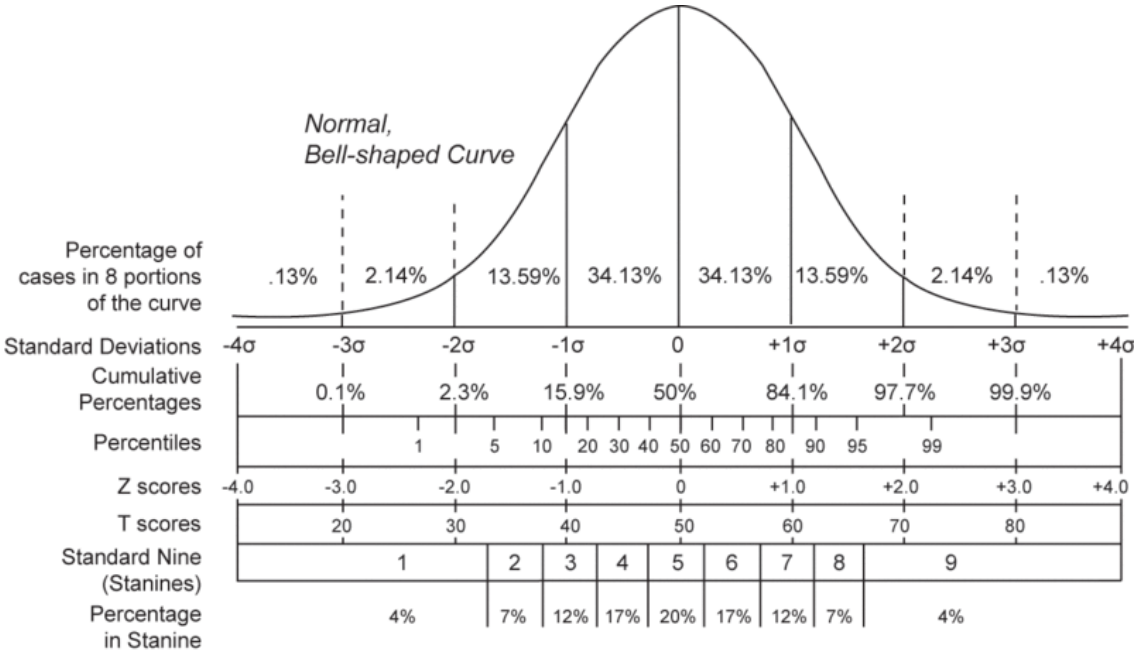
Conditions

What is the percentage of scores between 0.5 Z and -0.5Z?

Solution



In statistics, a **standard score** indicates by how many standard deviations an observation or datum is above or below the mean. It is a dimensionless quantity derived by subtracting the population mean from an individual raw score and then dividing the difference by the population standard deviation. This conversion process is called **standardizing** or **normalizing** (however, "normalizing" can refer to many types of ratios; see normalization (statistics) for more).

We must use Gauss error function:

$$\Phi(0.5) - \Phi(-0.5) = 0.38292$$

Answer: 38.292%