skewness (γ_1)

A measure for the skew of a curve, usually used to describe the *probability density functions* of *probability distributions*. A curve is left-skewed or has negative skewness, if its left *tail* is longer and/or heavier than its right tail. Subsequently, it is right-skewed or has positive skew, if its right tail is longer and/or heavier. There are closed forms for computing the exact skewness of specific probability distributions, but for a rough approximation, the formula $\mu - M$ can be used, where M is the *median* and μ the *mean* of a distribution. The sign of the result corresponds to the skewness of the curve.

The symbol γ_1 is often used to indicate skewness. Symmetric distributions, like the *normal distribution*, have a skewness of $\gamma_1 = 0$. Sample curves can be found in figure SKW.



Figure **SKW:** skewness; left: negative skewness, skew to the left; right: positive skewness, skew to the right; in both panels the solid line indicates the mean, the dashed line the median.