

Chapter 6

Excel Statistical Functions 5

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1. FORECAST.LINEAR

a function used to calculate or predict future values using existing values.

The syntax of the function is:

=FORECAST.LINEAR(x; known_y's; known_x's)

x The data point for which you want to predict the value.

known_y's Dependent array or range of data.

known_x's Independent array or range of data.

2. INTERCEPT

a function used to calculate the point where a line will intersect the y-axis using the x-value and y-value.

The syntax of the function is:

=INTERCEPT(known_y's; known_x's)

known_y's The unit of observation or dependent data.

known_x's The unit of observation or independent data.

3. LINEST

function used to determine the parameters of the exponential trend.

The syntax of the function is:

=LINEST(known_y's; [known_x's]; [const]; [stats])

known_y's The set of y-values that you already know in the relationship $y = mx + b$.

[known_x's] A set of x-values that you may already know in the relationship $y = mx + b$.

[const] A logical value specifying whether to force the constant b to equal 0.

[stats] A logical value specifying whether to return additional regression statistics.

4. SLOPE

a function used to find the slope of a linear regression line through data points in known_y's and known_x's.

The syntax of the function is:

=SLOPE(known_y's; known_x's)

known_y's An array or cell range of numeric dependent data points.

known_x's The set of independent data points.

5. TREND

a function used to find values along a linear trend.

The syntax of the function is:

=TREND(known_y's; [known_x's]; [new_x's]; [const])

known_y's The set of y-values you already know in the relationship $y = mx + b$

[known_x's] An optional set of x-values that you may already know in the relationship $y = mx + b$

[new_x's] New x-values for which you want TREND to return corresponding y-values

[const] A logical value specifying whether to force the constant b to equal 0

6. GROWTH

function used to calculate exponential growth predictions using existing data.

The syntax of the function is:

=GROWTH(known_y's; [known_x's]; [new_x's]; [const])

known_y's Required. The set of y-values you already know in the relationship $y = b * m^x$.

[known_x's] An optional set of x-values that you may already know in the relationship $y = b * m^x$.

[new_x's] Are new x-values for which you want GROWTH to return corresponding y-values.

[const] A logical value specifying whether to force the constant b to equal 1.

7. LOGEST

function used to calculate an exponential curve that fits your data and returns an array of values that describe the curve.

The syntax of the function is:

=LOGEST(known_y's; [known_x's]; [const]; [stats])

known_y's The set of y-values you already know in the relationship $y = b * m^x$.

[known_x's] An optional set of x-values that you may already know in the relationship $y = b * m^x$.

[const] A logical value specifying whether to force the constant b to equal 1.

[stats] A logical value specifying whether to return additional regression statistics.

8. STEYX

a function used to determine the standard error of the estimated y-value for each x-value in the regression.

The syntax of the function is:

=STEYX(known_y's; known_x's)

known_y's Dependent array or range of data points.

known_x's Independent array or range of data points.

9. BETA.DIST

function used to calculate the beta distribution.

The syntax of the function is:

=BETA.DIST(x; alpha; beta; cumulative; [A]; [B])

x The value between A and B at which to evaluate the function.

alpha A parameter of the distribution.

beta A parameter of the distribution.

cumulative A logical value that determines the form of the function.

[A] A lower bound to the interval of x.

[B] An upper bound to the interval of x.

10. BINOM.DIST

function used to determine the probability distribution of individual binomials.

The syntax of the function is:

=BINOM.DIST(number_s; trials; probability_s; cumulative)

number_s The number of successes in trials.

trials The number of independent trials.

probability_s The probability of success on each trial.

cumulative A logical value that determines the form of the function.

11. BINOM.DIST.RANGE

function used to determine the probability of an experiment using the binomial distribution.

The syntax of the function is:

=BINOM.DIST.RANGE(trials; probability_s; number_s; [number_s2])

trials The number of independent trials. Must be greater than or equal to 0.
probability_s The probability of success in each trial. Must be greater than or equal to 0 and less than or equal to 1.
number_s The number of successes in trials. Must be greater than or equal to 0 and less than or equal to Trials.
[number_s2] If provided, returns the probability that the number of successful trials will fall between Number_s and number_s2.

12. BINOM.INV

function that is used to find out the smallest value where the cumulative binomial distribution is greater than or equal to the criterion value.

The syntax of the function is:

=BINOM.INV(trials; probability_s; alpha)

trials The number of Bernoulli trials.
probability_s The probability of a success on each trial.
alpha The criterion value.

Reference:

<https://support.microsoft.com/>