

Exponential Graph

An **exponential graph** is a representation of an exponential function of the form:

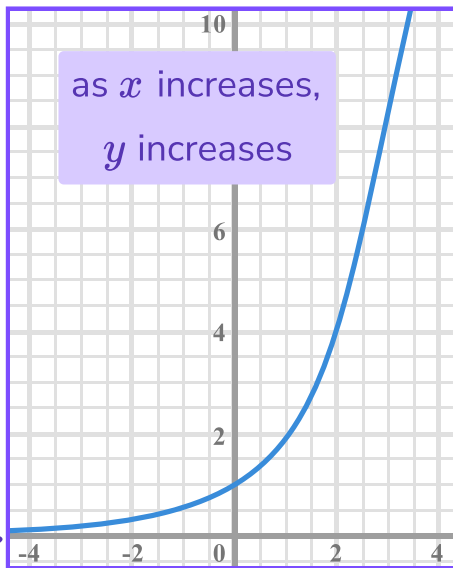
$$y = k^x$$

 Examples

$$y = 2^x$$



The graph will never touch the x -axis



Exponential growth
 $k > 1$

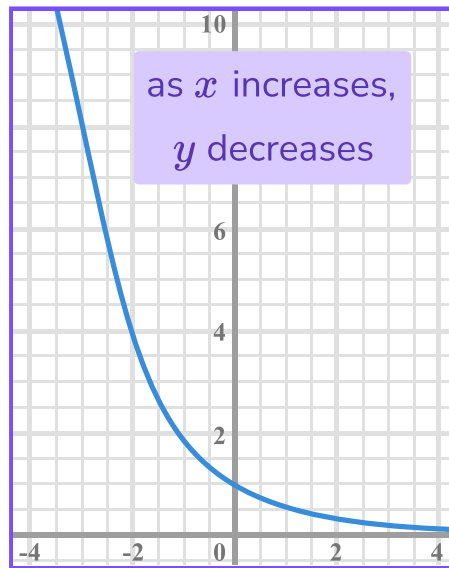
In these examples the y -intercept (at $x = 0$) is 1 since anything raised to the power 0 is 1

as x increases,
 y decreases

$$y = \left(\frac{1}{2}\right)^x$$



The graph will never touch the x -axis



Exponential decay
 $k < 1$