

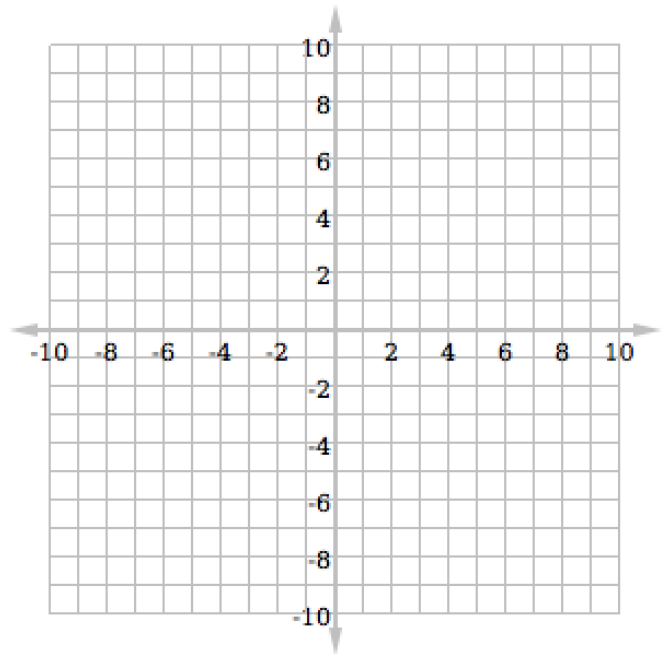
Lesson 4.2: The Natural Exponential Function

The Natural Exponential Function

The **natural exponential function** is an exponential function with base _____ .

$$f(x) = ae^x$$

Example: Graph the functions $f(x) = e^x$ and $f(x) = 3e^{0.5x}$ on the same axes.



What is the difference between the two functions?

Continuously Compounded Interest

Continually compounded interest is calculated by the formula:

Example: Find the amount after 3 years if \$1,000 is invested at an interest rate of 12% per year, compounded continuously.