U6D5 **Exponential Equations Part 2**

Method #2 : Systematic Trial

Used when you cannot find a common base:

Example1:

a. solve $3^x = 7$ to 1 decimal place

b. solve $2^{x+1} = 5$ to 1 decimal place

Example 2:

Justin has $1000 in savings to invest, and he wants $1200 to use to buy a new laptop in a few years. If he earns 4.3% per year, compounded annually, the equation that describes Justin's investment is $1200 = 1000(1.043)^n$, where n is the number of years for which the money is invested. Solve the equation for n to determine how long it will take before he can buy the laptop. Round your answer to one decimal place.

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Method #3 : Graphing

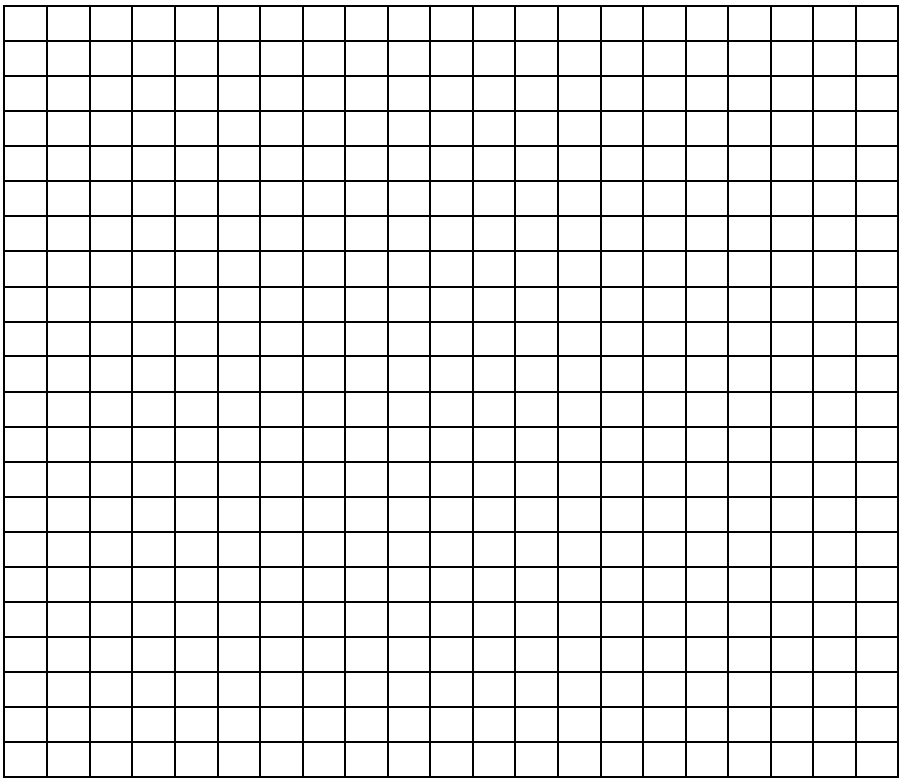
This is the least accurate of the three methods. It can be used when you cannot calculate rational or decimal exponents.

Method – create a table of values, graph and estimate the solution.

Example:

a. $3^x = 35$

x	*y*



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