

Exponential Graphs and Equations



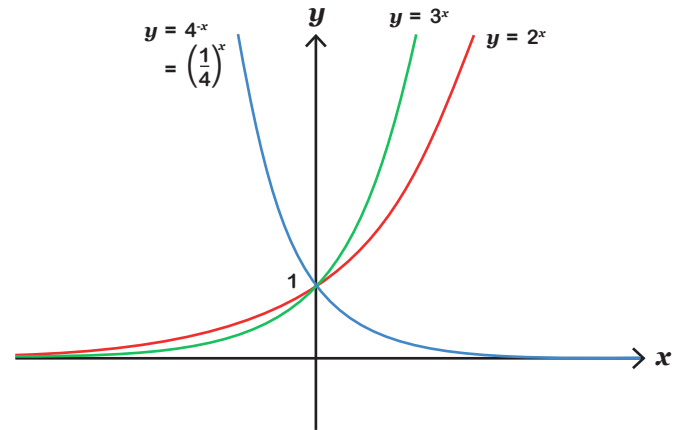
Here are some exponential equations in the form

$$y = a^x$$

The variable x is the power (or exponent).

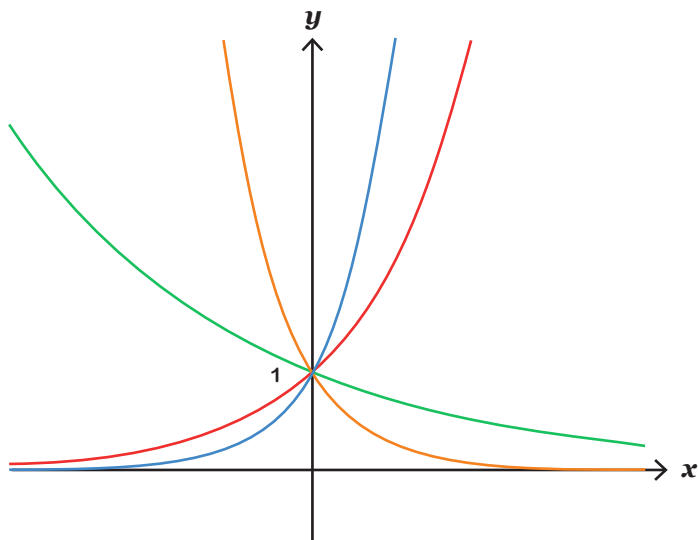
Some exponential equations will be in the form

$$y = a^{-x} \text{ this is the same as } y = \left(\frac{1}{a}\right)^x$$



Section A

Match the graph to the exponential equation. Label the graphs with A, B, C or D.



A $y = 6^x$

B $y = 1.5^{-x}$

C $y = 0.2^x$

D $y = 2.5^x$

Section B

Substitute $x = 0$ into the equations to help label the graphs with 1, 2, 3, 4 or 5.

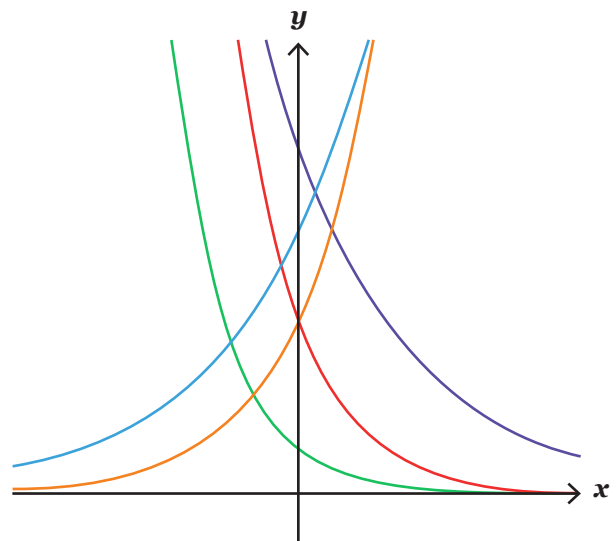
1 $y = 3(2^x)$

2 $y = 0.5(5^{-x})$

3 $y = 2(3^x)$

4 $y = 2(4^{-x})$

5 $y = 4(0.5^x)$

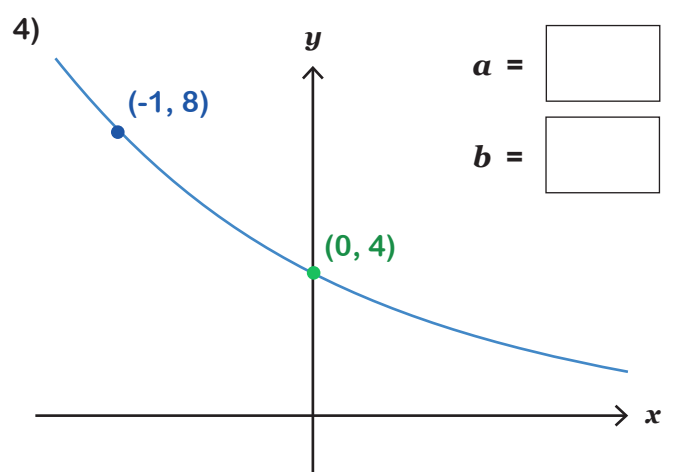
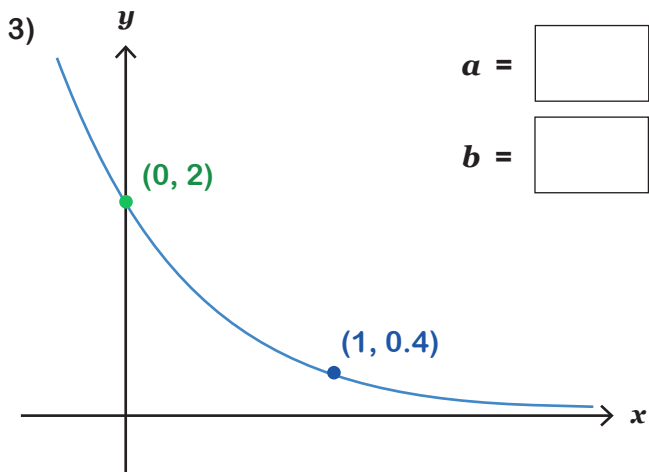
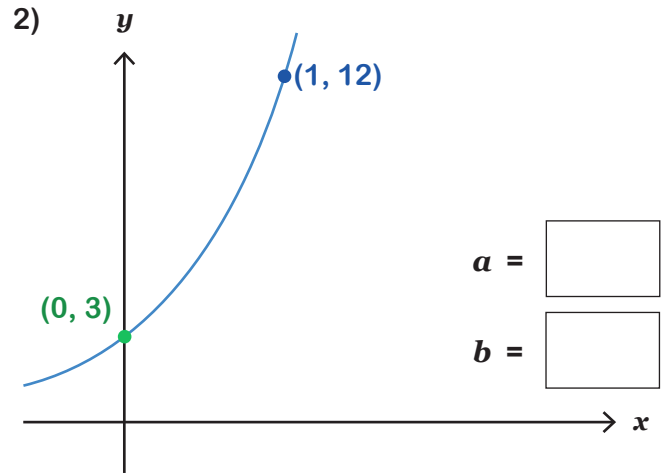
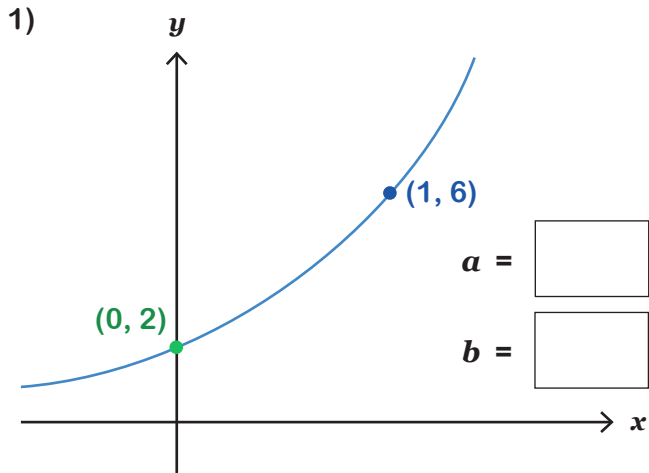


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Section C

These graphs have equations in the form $y = ab^x$.
Use the coordinates given to find the values of a and b .



Section D

These graphs have equations in the form $y = ab^x$.
Use the coordinates given to find the values of a and b .

