

Maths Required Before Entering

Example Problems

Example 1:

Simplify the following expression: $\frac{xy^2}{11} + xy^2 - \frac{xy^2}{9}$

Example 2:

Solve for x: $8e^{2x+1} = 3$

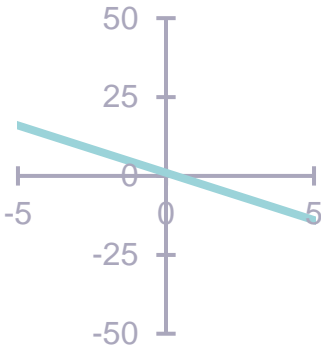
Example 3:

Solve for x: $5 = \ln(2 - 3x)$

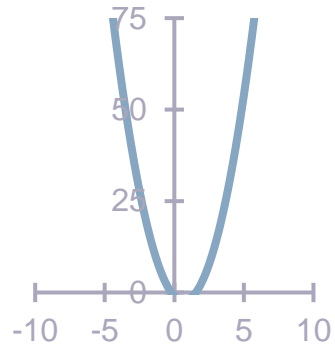
Example 4:

Match each graph to its corresponding equation.

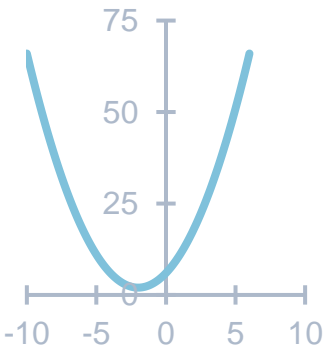
A)



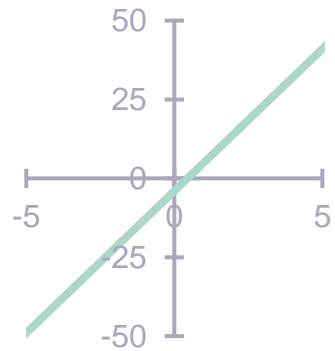
B)



C)



D)



I) $y = x^2 + 4x + 6$

III) $y = 3x^2 - 4x - 1$

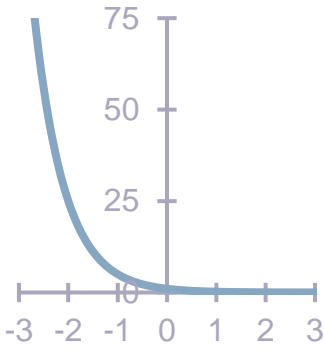
II) $y = 9x - 4$

IV) $y = -3x + 1$

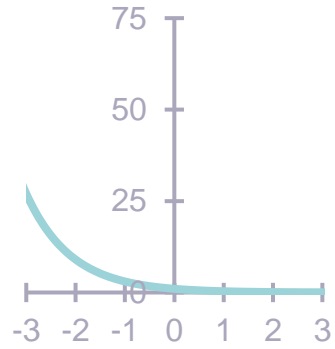
Example 5:

Match each graph to its corresponding equation.

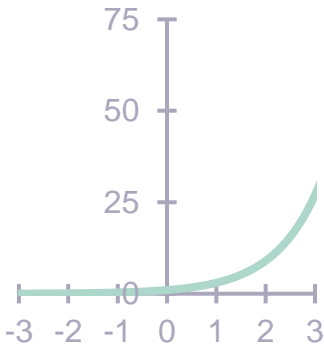
A)



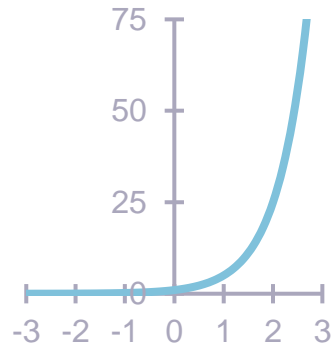
B)



C)



D)



I) $y = 5^x$

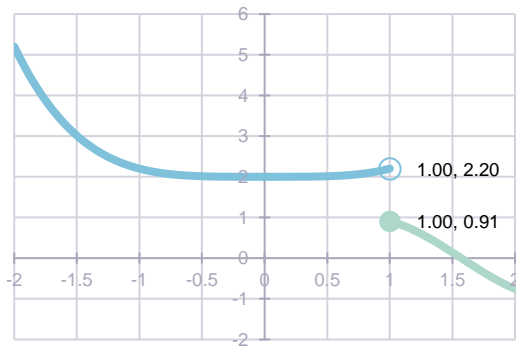
II) $y = 3^x$

III) $y = \left(\frac{1}{5}\right)^x$

IV) $y = \left(\frac{1}{3}\right)^x$

Example 6:

Consider the following graph:



Determine the following:

- The limit of the function as x approaches 1 from the left (i.e., $\lim_{x \rightarrow 1^-} f(x)$).
- The limit of the function as x approaches 1 from the right (i.e., $\lim_{x \rightarrow 1^+} f(x)$).
- Does the limit exist? Why or why not?