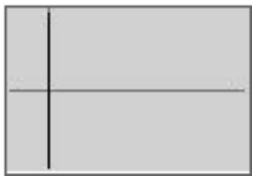
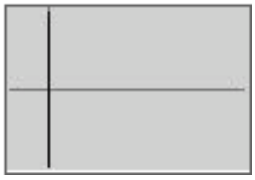
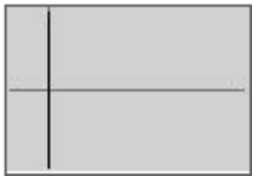
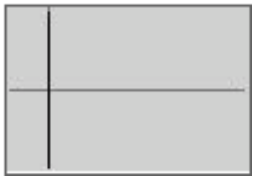
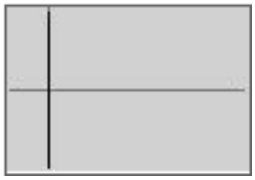
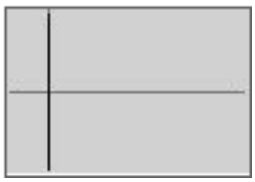
Parent Functions for Modeling Data: Activity A

Three functions commonly used to model scatter plots of data that increase or decrease are:

$y = ab^x$, $y = a + b\ln(x)$, and $y = ax^b$

The following parent functions represent these three general models. Complete the following information about the parent functions to generate a quick reference sheet for future use.

Parent Function	Graph	Increases or Decreases	Concave Up or Concave Down	Intercepts	Asymptotes
$y = e^x$					
$y = \left(\frac{1}{e}\right)^x$					
$y = \ln(x)$					
$y = -\ln(x)$					
$y = x^2$					
$y = x^{\frac{1}{2}}$					
$y = x^{-2}$