Name: _____ Date: _____

Learning Goal 0.1	**Expectations for graphing from previous years.**

Example Consider the function $y = x(x-1)^2(x+3)$.

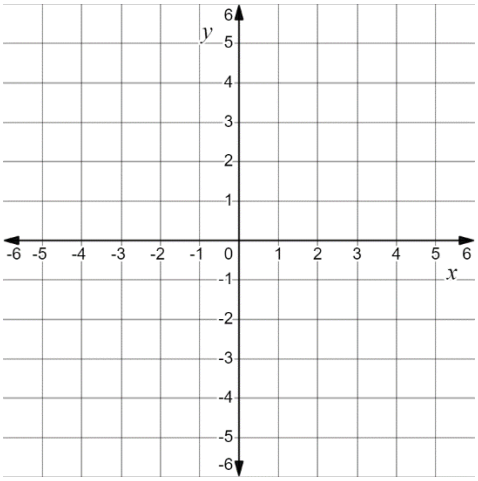
a. What kind of function is this?

b. Find the $x-$ intercept(s).

c. Find the $y-$ intercept.

d. Determine the domain and range.

e. Sketch the function.



Example Consider the function $y = \left(\frac{1}{2}\right)^x$

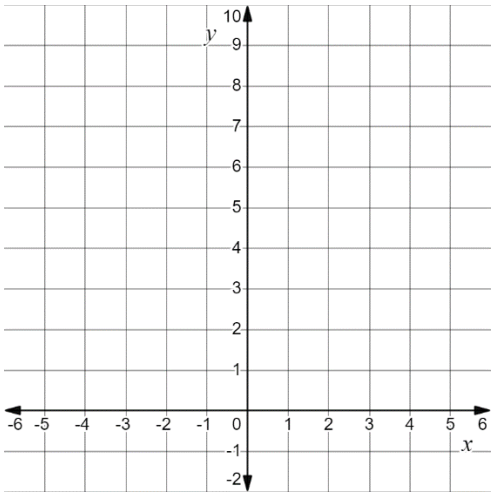
a. What kind of function is this?

b. Find the $x-$ intercept(s).

c. Find the $y-$ intercept.

d. Determine the domain and range.

e. Sketch the function.



Example Consider the function $y = \dfrac{2x}{x-3}$

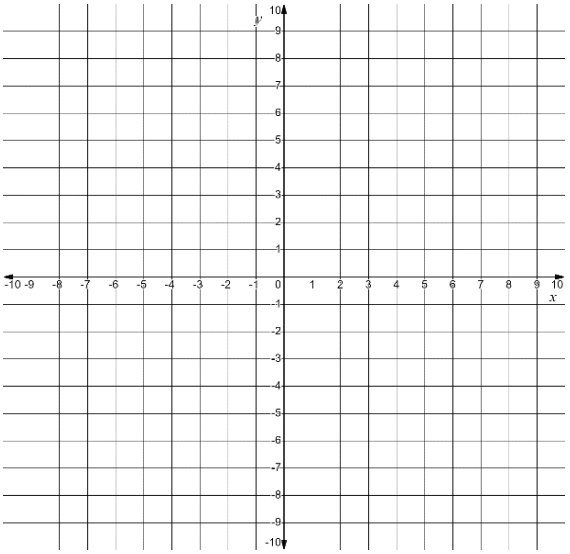
a. What kind of function is this?

b. Find the $x-$ intercept(s).

c. Find the $y-$ intercept.

d. Determine the domain and range.

e. Sketch the function.



Example Suppose a cost – benefit model is given by the following equation, where y is the cost in thousands of dollars of removing x percent of a given pollutant.

$$y = \frac{6.7x}{100-x}$$

a. What type of function is this?

b. Find the cost of removing 50% of the pollutant and 80% of the pollutant.

c. Is it possible to remove **all** of the pollutant? Explain.