

## GRTR-1 Graphing Exponential and Logarithmic Functions

(complete both problems for M, complete one problem for P) Given  $f(x) = \log_3(x + 2) - 3$

- a) State the range in interval notation.
- b) State the intercepts.
- c) State the asymptote.
- d) Provide a sketch of the graph.

Given the graphs shown below, find the equation that will create the graph. Equations should be of the form  $y = \log_a(x \pm b) \pm c$

