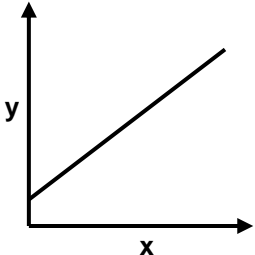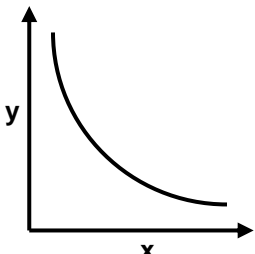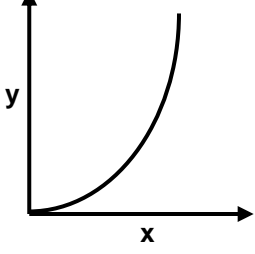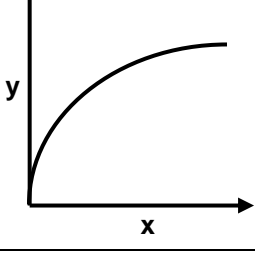# What happens if life throws you a curve – Straighten it!

This table summarizes the graphs and relationships that you will most likely encounter.

Graph Shape	Written relationship	Modification required to linearize the graph	Algebraic Representation
Linear Zero Slope y / x graph (horizontal line)	**DV is independent of the independent Variable** **As IV changes DV remains the same**	**None**	**DV = b**
Linear y / x graph (straight increasing line)	**DV is directly proportional to the IV**	**None**	**DV = Slope · IV**
Hyperbola y / x graph (decreasing curve)	**DV is inversely proportional to the IV**	**Graph** $$\frac{1}{Independent\ Variable}$$	$$DV = \frac{Slope}{Ind.Variable}$$
Top opening parabola y / x graph (upward curving)	**DV is proportional to the square of IV**	**Graph** $$(\text{Independent Variable})^2$$	$$DV = Slope(Ind.Var)^2$$
Side opening parabola y / x graph (sideways curve)	**The DV square is proportional to IV**	**Graph** $$(\text{Dependent Variable})^2$$	$$(DV)^2 = Slope \cdot (Ind.Var)$$