This table summarizes the graphs and the relationships that you are most likely to see in this Physics course.

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| --- | --- | --- | --- |
| Graph Shape | **Written relationship** | **Modification required to linearize the graph** | **Algebraic representation** |
| **Straight Horizontal line****y****x** | **No Relationship****y is independent of x****As x changes, y remains the same.** | **None** | **y = b** |
| **Straight Diagonal Line****y****x** | **Linear****y is directly proportional to x** | **None** | **y = mx + b** |
| **hyperbola****y****x** | **Inverse or****Inverse squared****y is inversely proportional to x.** | **Inverse****Graph y vs** **or y vs x-1****Inverse Squared****Graph y vs** **or y vs x-2)** | **y = m+ b****or****y = + b** |
| top or bottom opening parabola**y****x** | **Quadratic or****Exponential****y is proportional to the square of x.** | **Graph y vs x2****or****y vs xn** | **y = mx2 + b****y = mxn + b** |
| side opening parabola**y****x** | **Logarithmic****Square Root****(Use exponential relationship choices in LoggerPro curve fit)****The square of y is proportional to x.** | **Graph y2 vs x****or****yn vs x** | **y2 = mx + b****yn = mx + b** |