**Solving Differential Equations and Sketching Slope Fields/Direction Fields**

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| Differential Equation | Solve the Separable Differential Equation |
| $$\frac{dy}{dx}= \frac{x^{2}}{y^{2}}$$ |  |
| Table | Graph |
| Complete the table of values for -3< x < 3 and -3 < y < 3

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| x | y | dy/dx |
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 | Graph the Slope Field/Direction Field for the values in the table.  C:\Users\Carol\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\2007LINK-Diff Eq 1.jpgUse your graphing calculator to graph the slope field and the specific equation that satisfies the initial condition that when x = 0, y = 2. Sketch the equation above. NOTE: The solution to a differential equation must be a continuous function. |