* 1. **Design of region *D4***
     1. **Curve fitting and interpolation**

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| Note that what is done in the design of *D2* and *D3* is pretty much fitting a shape with some curve. In numerical analysis, it is called interpolation, which means the process of predicting the continuous value between discrete data points with some function or curve. Bezier curves are a classical method of interpolation, which is essentially a parameterised polynomial. Hence, why not just use a polynomial to fit some given pattern and get a design?  Given a handwritten letter M shown in Figure 1, a polynomial is | Figure 1. Handwritten letter M | Figure 2. 10 sample points Lagrange interpolation |
| used for interpolation for 10 sample points of upper and lower boundaries respectively. | |