MATH 373: CLASS 8

1. Exercise

1) Given 3 points $(x_0, y_0) = (1, 2), (x_1, y_1) = (3, 5)$ and $(x_2, y_2) = (4, -2)$. Use Neville's method to find $P_{0,1}, P_{0,2}, P_{1,2}, P_{0,1,2}$.

2) Suppose $x_j = j$, for $j = 0, 1, 2, 3$ and it is known that $P_{0,1}(x) = 2x+1$, $P_{0,2}(x) = x + 1$ and $P_{1,2,3}(2.5) = 3$. Find $P_{0,1,2,3}(2.5)$

3) Use Newton's Divide Difference Method to interpolate polynomial degree 2 given that $(x_0, y_0) = (1, 2)$, $(x_1, y_1) = (3, 5)$ and $(x_2, y_2) = (4, -2)$.