Math 371
Quiz 7, April 10, 2015 Name: _____

1. Consider the table of function values below.

x	1	3/2	0
$f(x)$	3	13/4	3

(a) Fill out the Newton divided difference table provided below for the above function values.

x	$f[\ \cdot\ ]$	$f[\ \cdot\ ,\ \cdot\ ]$	$f[\ \cdot\ ,\ \cdot\ ,\ \cdot\ ]$
1	$f[1] =$	$f[1, 3/2] =$	$f[1, 3/2, 0] =$
3/2	$f[3/2] =$	$f[3/2, 0] =$	
0	$f[0] =$		

Scratch space:

(b) Write down, but do not simplify, the polynomial interpolant P in *Newton form* of f through points $(1, 3),\ (3/2, 13/4),\ (0, 3)$.

(c) Write down, but do not simplify, the polynomial interpolant P in *Lagrange form* of f through points $(1, 3),\ (3/2, 13/4),\ (0, 3)$.