

A table for forward, backward and central divided difference example								
$f(x)=7x^4$								
Initial Step size	0.16							
x	3							
Exact Value $f'(3)$	756.00000000							
Forward Divided Difference								
x	h	$f'(x)$	Approximate Error	Absolute Relative Approximate Error in Percentage	Number of Significant Digits Correct	Absolute Relative True Error in Percentage	True Error	
3	0.1600	818.6591				8.2882	-62.6591	
3	0.0800	786.7812	-31.8779	4.0517	1	4.0716	-30.7812	
3	0.0400	771.2548	-15.5263	2.0131	1	2.0178	-15.2548	
3	0.0200	763.5937	-7.6612	1.0033	1	1.0045	-7.5937	
3	0.0100	759.7884	-3.8052	0.5008	1	0.5011	-3.7884	
3	0.0050	757.8921	-1.8963	0.2502	2	0.2503	-1.8921	
Backward Divided Difference								
x	h	$f'(x)$	Approximate Error	Absolute Relative Approximate Error in Percentage	Number of Significant Digits Correct	Absolute Relative True Error in Percentage	True Error	
3	0.1600	697.6417				7.7193	58.3583	
3	0.0800	726.2940	28.6523	3.9450	1	3.9294	29.7060	
3	0.0400	741.0140	14.7199	1.9865	1	1.9823	14.9860	
3	0.0200	748.4735	7.4596	0.9966	1	0.9956	7.5265	
3	0.0100	752.2284	3.7548	0.4992	2	0.4989	3.7716	
3	0.0050	754.1121	1.8837	0.2498	2	0.2497	1.8879	

