

Summary:

- Finite Differences = First and Second Differences
- To use Finite Differences the x-values must be increasing or decreasing by the same amount.
- If the First Differences are not constant, the relation is _____.
- If the Second Differences are constant, it is a _____.
- You can use quadratic regression on a graphing calculator to find the _____ of the _____.
- You can use an equation that models the data set to _____ about the data.

2. Calculate the first and second differences. Then, determine if each relation is linear, quadratic, or neither.

a)

x	y	First Differences	Second Differences
-1	16		
0	14		
1	8		
2	-2		
3	-16		

b)

x	y	First Differences	Second Differences
0	1		
1	2		
2	4		
3	8		
4	16		

c)

x	y	First Differences	Second Differences
-2	3		
-1	0		
0	-2		
1	-3		
2	-3		

d)

x	y	First Differences	Second Differences
-4	-1		
0	2		
4	5		
8	8		
12	11		

Practice: Pg. 289 # 1, 2, 3, 8 abcd CHECK Answers Pg. 553-554