

Chapter 6 Review



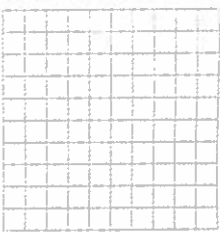
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6.1 Explore Non-Linear Relations, textbook pages 238-244

1. Graph the data in each table. Join the points with a line or a curve of best fit. Explain your choice.

I used a _____ because _____

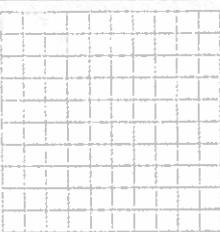
x	y
0	2
1	3
2	6
3	11
4	18
5	27
6	38
7	51
8	66



2. The formula for the area of a circle is $A = \pi r^2$, where r represents the radius.

- a) Find the areas of circles for the given radii and record them in the table. Graph the data in the table and connect the data points with a smooth curve. (Use $\pi = 3.14$ for your calculations.)

radius (cm)	Area (cm ²)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	



6.2 Model Quadratic Relations, textbook pages 245-253

3. Is each relation linear or quadratic? Explain your answer.
- a) $y = x^2 + 4$
- b) $y = 3x + 4$
- c) $y = x^2 + 5x - 6$

Date: _____



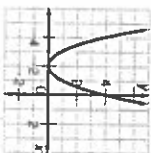
4. Using a graphing calculator, graph the set of data. Describe the type of relation the data set best represents and explain why.

x	y
0	2
0.5	1.25
1	-1
1.5	-4.75
2	-10
2.5	-16.75
3	-25
3.5	-34.75

I think the relation is _____ because _____

6.3 Key Features of Quadratic Relations, textbook pages 254-263

5. Provide the information for the graph.



Coordinates of the vertex: (____, ____)

Equation of the axis of symmetry: _____

y-intercept(s): _____

Minimum or maximum value: _____

x-intercept(s): _____

6.4 Rates of Change in Quadratic Relations, textbook pages 264-271

6. Determine if the relation is linear, quadratic, or neither. Provide an explanation for your answer.

x	y	First Differences	Second Differences
-3	12		
-2	7		
-1	4		
0	3		
1	4		
2	7		
3	12		

The relation is _____ because _____