A Beach Problem Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fred Murphy is a Geologist for the Army Corp of Engineers. His parents have had a home off the beach in Sea Isle City, NJ since the early 1950’s. In 1985, Mr. Murphy visited for the first time in five years and noticed that the beach appeared shorter than he remembered. Curious as ever he proceeded to pull out his tape measure and measure the width of the beach from the steps at 55th street to the high tide mark, as measured by the line of seaweed that ran down the beach. He found it to be 35 meters wide and made a note of it in his journal. He was able to make it back a year later, and on his last day came across the note he had left the prior year. Again, he measured the beach in the same manner. This time it was 33 meters wide. He returned again in 1987 to live permanently a measured the beach every year from 1987-1995 collecting the following data (in year order): 31, 30, 29, 28, 27, 26, 25, 24, and 23 meters. He then showed the data to a colleague at the Army Corp of Engineers who took action on it.

a. Identify the independent and dependent variables?

IV \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DV \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. Identify the x and y axis?

X \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Y \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. On the graph paper provided create a data table from the information in the paragraph above.

d. From your data table create a graph of the data.

e. Based on your graph, answer the following question: What did the ten years of data demonstrate was going on?

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f. If nothing was done, how wide would the beach be in 2010?

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