Name: _____ Points: _____

I. Normal Distribution

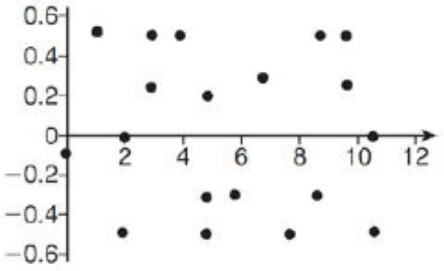
1. Test scores are normally distributed with a mean of 76 and a standard deviation of 10.
   a. In a group of 230 tests, how many students score above 96?
   b. In a group of 230 tests, how many students score below 66?
   c. In a group of 230 tests, how many students score within one standard deviation of the mean?

2. The number of nails of a given length is normally distributed with a mean length of 5.00 in. and a standard deviation of 0.03 in.
   a. Find the number of nails in a bag of 120 that are less than 4.94 in. long.
   b. Find the number of nails in a bag of 120 that are between 4.97 and 5.03 in. long.
   c. Find the number of nails in a bag of 120 that are over 5.03 in. long.

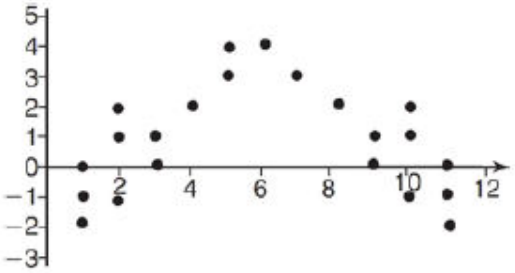
II. Correlation & Regression

3. If we say that the relationship between two variables is significant at the 5% level, what does that actually mean?

4. The residual plots from two different sets of bivariate data are graphed below.



Graph A



Graph B

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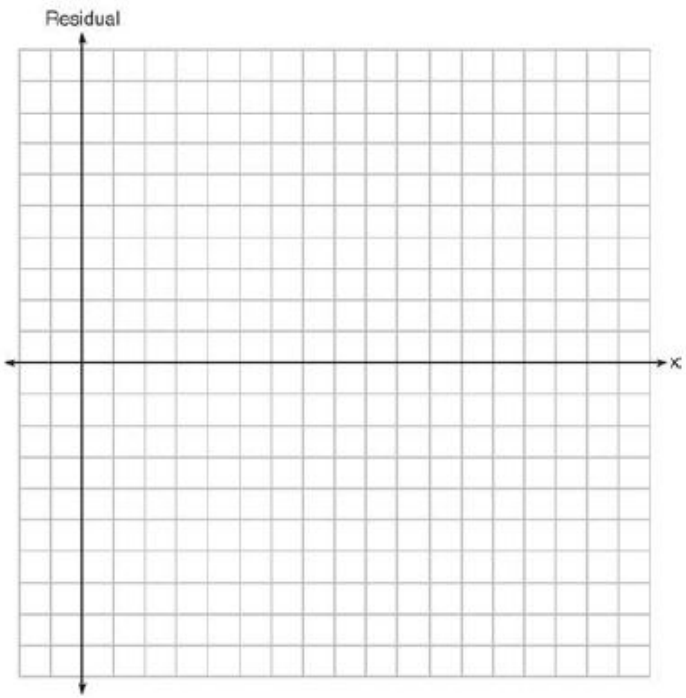
Explain, using evidence from graph A and graph B, which graph indicates that the model for the data is a good fit.

5. The table below represents the residuals for a line of best fit.

x	2	3	3	4	6	7	8	9	9	10
Residual	2	1	−1	−2	−3	−2	−1	2	0	3

Plot these residuals on the set of axes below. Using the plot, assess the fit of the line for these residuals and justify your answer.



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