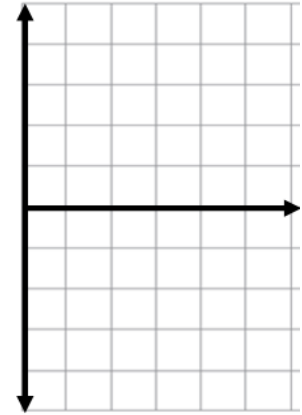Residual Plots Worksheet

Complete each table using the given linear regression (Round answers to one decimal place). Construct a residual plot.

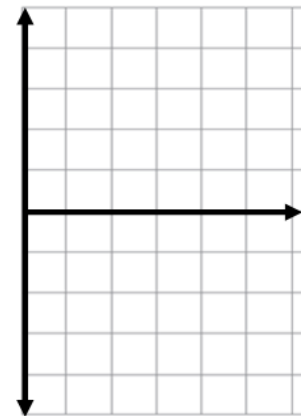1. Linear regression equation: y = 0.5x

x	y	Predicted Value	Residual Value
5	3		
10	4		
15	9		
20	7		
25	13		
30	15		

Does the residual plot suggest a linear relationship? Explain.

2. Linear regression equation: y = -0.4x + 16.3

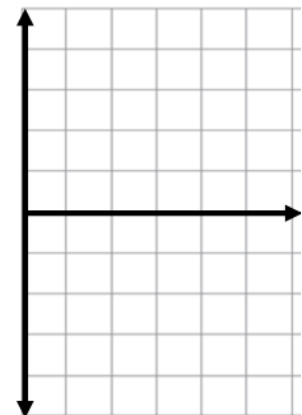| x	y	Predicted Value	Residual Value
2	5		
4	15		
6	26		
8	23		
10	11		
12	3		

Does the residual plot suggest a linear relationship? Explain.

3. Linear regression equation: y = 4.9x + 16.4

| x	y	Predicted Value	Residual Value
100	505		
90	460		
80	415		
70	360		
60	305		
50	265		

Does the residual plot suggest a linear relationship? Explain.

4. The table shows the percent of the United States population who did not receive needed dental care services due to cost.

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Percent	7.9	8.1	8.7	8.6	9.2	10.7	10.7	10.8	10.5	12.6	13.3

a. Sketch a scatter plot of the data

b. Using two point from the data estimate the equation of the line of best fit.
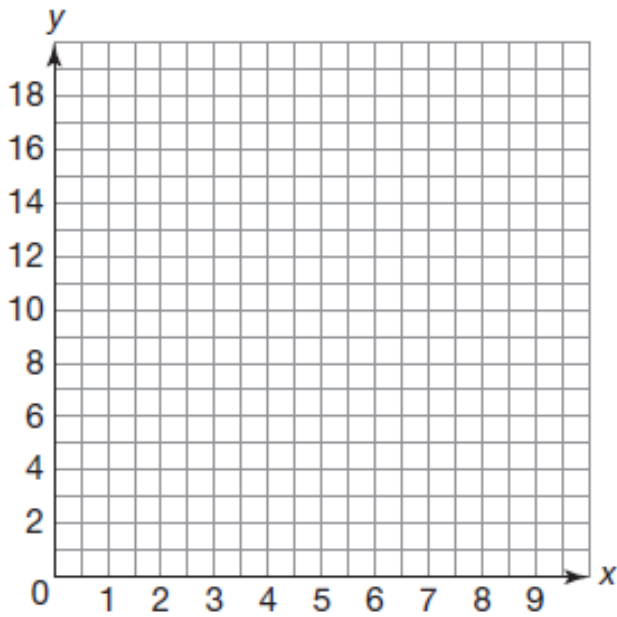
c. Using the estimated line of best fit equation, calculate the residuals for the set of data (round to one decimal place). Construct a residual plot for the data.