**POP TEST – Bivariate Statistics Revision Sheet**

1. Use words that best describes the correlation of the above graph. (eg. weak, moderate, strong, linear, non-linear, positive, negative). (3)
2. Finding the Correlations
   1. Find the Q-Correlation of the above graph. (3)
   2. Describe the strength of the correlation by the value of Q obtained. (1)
   3. Find r (Pearson Correlation Co-efficient). (1)
   4. Find r2 and describe how this relates to the graph. (2)
3. Algebraic Modeling
   1. Using your best judgment draw a “line of best fit” on the graph. (1)
   2. Determine two points on your “line of best fit” and use those points to work out the equation of your best fit line. (The equation is in the form of y = mx+c where m is the gradient and c is the y-intercept). (3)
   3. From your equation determine the value of y when x = 8. (1)

* 1. From your equation determine the value of x when y = 14 (1)

**REGRESSION LINE ANALYSIS**

1. The following List of value has be graphed for your convenience (GRAPH 2)

**GRAPH 2**

|  |  |
| --- | --- |
| **x** | **y** |
| 2 | 22 |
| 5 | 20 |
| 7 | 29 |
| 15 | 55 |
| 16 | 44 |
| 22 | 40 |
| 23 | 63 |
| 24 | 66 |
| 26 | 51 |
| 34 | 70 |

1. Find the least square regression line using the calculator for GRAPH 2. (hint use regression linear mx+b) (1)
2. Find the three median regression equation of the line for GRAPH 2 (you may use the graph but be accurate) (9)