$\qquad$

1. The following are the mathematics test results of two groups of 416 students:

|  |  | ar | pr | sed | p |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Group 01: | 40 | 55 | 89 | 89 | 80 | 76 | 78 | 75 | 73 | 72 |
|  | 71 | 70 | 69 | 66 | 64 | 59 | 58 | 56 | 56 | 78 |
|  | 74 | 72 | 73 | 75 | 60 |  |  |  |  |  |
| Group 02: | 39 | 85 | 47 | 51 | 54 | 83 | 78 | 77 | 75 | 61 |
|  | 56 | 56 | 55 | 73 | 72 | 72 | 71 | 70 | 69 | 69 |
|  | 69 | 68 | 67 | 66 | 65 | 63 |  |  |  |  |

a) In which group would a student with a result of $78 \%$ have a better placement?
b) Patrick was in Group 01 and Michael was in Group 02. They both placed in the $85^{\text {th }}$ percentile. Who had a higher score?
2. Calculate the mean, median, mode and mean deviation for each of the following:
a. $3,5,8,10,12$
b. $12,15,36,21,45,36$
3. Calculate the correlation coefficients for the following scatter plots:

Distribution P


Distribution Q


Distribution R

4. Given the following data:

| x | 2 | 4 | 5 | 8 | 9 | 11 | 15 | 18 | 20 | 27 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| y | 40 | 38 | 44 | 27 | 24 | 28 | 21 | 23 | 26 | 18 |

a) Calculate the equation of the Mayer Line
b) Calculate the equation of the Median-Median Line

