**SENIOR THREE**

**MATHEMATICS REVISION TEST I**

1. Given that , make I the subject of the formula, hence evaluate I for Q = 1000, t = 200 and R = 2.
2. Given that; .Find the value of *x* and *y*.
3. Given that  and , evaluate .
4. Given that  and  without using table or calculators, find .
5. Find the value of a and b given that = ( 39 25)
6. Given that matrix , find a matrix B such that AB = . Hence find the inverse of matrix A.
7. Given that vectors ,  and , find ;
   1. m + 2n + p hence
   2. 
8. The position vectors of x and y are and respectively K is on such that . Find;
   1. XY
   2. XK
   3. The position vector of M
9. A group of 35 children obtained the following marks in a certain subject

83 80 54 62 61 75 74

88 90 41 47 64 70 75

66 84 62 77 76 60 58

57 56 70 78 94 35 28

64 73 70 51 68 69 67

(a) (i) Form a grouped frequency table for the data starting from the class 20 -29

(ii) Calculate the;

* 1. Mean mark
  2. Modal mark
  3. Median mark

(b) Draw a cumulative frequency curve and estimate the median mark.

1. (a) Copy and complete the table below.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *x* | -2 | -1½ | -1 | -½ | 0 | ½ | 1 | 1½ | 2 | 2½ | 3 |
| *-2x2* |  |  |  |  |  |  |  |  |  |  |  |
| *3x* |  |  |  |  |  |  |  |  |  |  |  |
| *6* |  |  |  |  |  |  |  |  |  |  |  |
| *y* |  |  |  |  |  |  |  |  |  |  |  |

(b) (i) Use the completed table in (a) above to draw a graph of *y = 6 + 3x –2x2* for values of *x* for -2 use 2cm to represent one unit on the x-axis and 1cm to represent one unit on the y-axis.

(ii) On the same axes, draw a line whose equation is *y = 2x*

(c) Use the graph in b above to solve the equation 6 *+ x –2x2 = 0*