28. Find the median of following data :

| Class | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
|---|---|---|---|---|---|---|---|---|
| frequency | 7 | 14 | 13 | 12 | 20 | 11 | 15 | 8 |

## SECTION -D

29. On dividing P(x) = $3x^3 - 2x^2 + 5x - 5$ by a polynomial g(x), we get quotient and remainder as $x^2 - x + 2$ and -7 respectively. Find g(x).

30. Prove that : $\dfrac{1+\sin\theta-\cos\theta}{\sin\theta-1+\cos\theta} = \dfrac{\cos\theta}{1-\sin\theta}$

OR

$$\frac{\sec\theta\,\text{cosec}(90-\theta)\tan\theta\cot(90-\theta)+\sin^2 55+\sin^2 35}{\tan 10\tan 20\tan 30\tan 70\tan 80}$$

31. Prove that in a triangle the line drawn parallel to one side ,divides the other two sides proportionally.

OR

Prove that in a right angled triangle, the square of hypotenuse is equal to sum of the squares of other two sides.

32. If $x = p\sec\theta + q\tan\theta$ and $y = p\tan\theta + q\sec\theta$, prove that $x^2 - y^2 = p^2 - q^2$.

33. On the same axes draw the graph of each of the following equations :

2x – y +1 =0 ; x – 5y +14 =0 ; x – 2y +8=0.

Hence shade the region of the triangle so formed.

34. Daily pocket expenses of (in Rs) of 80 students of a school are given in the table below:

| Expenses | 0-5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30-35 |
|---|---|---|---|---|---|---|---|
| No. of students. | 5 | 15 | 20 | 10 | 10 | 15 | 5 |

Change the data into a' more than type table' and hence draw 'more than type' ogive.