SOAL I :

Perhatikan contoh data hasil nilai pengerjaan tugas Statistik I dari 40 siswa berikut ini :

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 66 | 75 | 74 | 72 | 79 | 78 | 75 | 75 | 79 | 71 |
| 75 | 76 | 74 | 73 | 71 | 72 | 74 | 74 | 71 | 70 |
| 74 | 77 | 73 | 73 | 70 | 74 | 72 | 72 | 80 | 70 |
| 73 | 67 | 72 | 72 | 75 | 74 | 74 | 68 | 69 | 80 |

Dari data di atas, Buatlah tabel distribusi frekuensi, distribusi frekuensi relatif, dan distribusi frekuensi kumulatif?

**JAWAB** : 1. Mengurutkan data dari yang terkecil ke yang terbesar atau sebaliknya.

|  |  |  |
| --- | --- | --- |
| **No.** | **Hasil Tugas** | **Mengurutkan** |
| 1 | 66 | 66 |
| 2 | 75 | 67 |
| 3 | 74 | 68 |
| 4 | 72 | 69 |
| 5 | 79 | 70 |
| 6 | 78 | 70 |
| 7 | 75 | 70 |
| 8 | 75 | 71 |
| 9 | 79 | 71 |
| 10 | 71 | 71 |
| 11 | 75 | 72 |
| 12 | 76 | 72 |
| 13 | 74 | 72 |
| 14 | 73 | 72 |
| 15 | 71 | 72 |
| 16 | 72 | 72 |
| 17 | 74 | 73 |
| 18 | 74 | 73 |
| 19 | 71 | 73 |
| 20 | 70 | 73 |
| 21 | 74 | 74 |
| 22 | 77 | 74 |
| 23 | 73 | 74 |
| 24 | 73 | 74 |
| 25 | 70 | 74 |
| 26 | 74 | 74 |
| 27 | 72 | 74 |
| 28 | 72 | 74 |
| 29 | 80 | 75 |
| 30 | 70 | 75 |
| 31 | 73 | 75 |
| 32 | 67 | 75 |
| 33 | 72 | 75 |
| 34 | 72 | 76 |
| 35 | 75 | 77 |
| 36 | 74 | 78 |
| 37 | 74 | 79 |
| 38 | 68 | 79 |
| 39 | 69 | 80 |
| 40 | 80 | 80 |

2. Membuat Kategori atau kelas

 Jumlah kategori **(k) = 1 + 3,322 log n -> n = jumlah data**

 k = 1 + 3,322 log 40

 = 1 + 3,322 (1,602)

 = 1 + 5,3218

 = 6, 3218 🡪 6 atau 7 sesuai kebutuhan

3. Menentukan invertal kategori / kelas

 **Interval/Panjang Kelas kelas = (Nilai terbesar – Nilai terkecil)/Jumlah kelas**

Interval / panjang kelas = (80 – 66)/6,3218 = 14/6,3218 = 2,215 🡪 3

(65 + 67)/2 = 66

4. Melakukan penturusan atau pentabulasian dari data mentah

 **Distribusi Frekuensi**



 **Distribusi Frekuensi Relatif**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Kelas | Hasil Tugas | Jumlah Frekuensi (F) | Frekuensi Relatif | Keterangan |
| 1 | 65 - 67 | 2 | 5% | (2/40) x 100 % |
| 2 | 68 - 70 | 5 | 12.5% | (5/40) x 100 % |
| 3 | 71 - 73 | 13 | 32.5% | (13/40) x 100% |
| 4 | 74 - 76 | 14 | 35% | (14/40) x 100% |
| 5 | 77 - 79 | 4 | 10% | (4/40) x 100% |
| 6 | 80 - 82 | 2 | 5% | (2/40) x 100 % |

 **Distribusi Frekuensi Kumulatif**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Kelas | Hasil Tugas | Jumlah Frekuensi (F) | Batas Kelas | Ujung Bawah Kelas | Frekuensi kumulatif Kurang Dari | Frekuensi kumulatif Lebih Dari |
| 1 | 65 - 67 | 2 | 64.5 | 65 | 0 + 0 = 0 | 40 - 0 = 40 |
| 2 | 68 - 70 | 5 | 67.5 | 68 | 0 + 2 = 2 | 40 - 2 = 38 |
| 3 | 71 - 73 | 13 | 70.5 | 71 | 2 + 5 = 7 | 38 - 5 = 33 |
| 4 | 74 - 76 | 14 | 73.5 | 74 | 7 + 13 = 20 | 33 - 13 = 20 |
| 5 | 77 - 79 | 4 | 76.5 | 77 | 20 + 14 = 34 | 20 - 14 = 6 |
| 6 | 80 - 82 | 2 | 79.5 | 80 | 34 + 4 = 38 | 6 - 4 = 2  |
| 82.5 | 83 | 38 + 2 = 40 | 2 - 2 = 0 |

**(79+80)/2=79.5**

 **Dari data di atas buatlah grafik histogram, poligon, dan ogive!! Tugas dikumpulkan hari ini 14 Agustus 2018 sebelum jam 17.30 WIB**