CONTOH DAN JAWABAN

Salah seorang pengamat ekonomi ingin mengetahui rata-rata pengeluaran masyarakat dalam berbelanja secara online. Berikut data yang berhasil dikumpulkan:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Pengeluaran per hari (ratusan ribu Rupiah) | Fi | | 0 - 19 | 100 | | 20 - 39 | 88 | | 40 - 59 | 120 | | 60 - 79 | 130 | | 80 - 99 | 150 | | 100 - 119 | 70 | | **∑** | 658 | | Berdasarkan data di samping, hitunglah:   1. Nilai jarak (*range*) 2. Nilai rata-rata hitung, modus, dan median 3. Persentil 85 4. Standar Deviasi dan Variasi 5. Koefisien Varian |

Jawaban

|  |  |  |
| --- | --- | --- |
| Pengeluaran per hari (ratusan ribu Rupiah) | Fi | Nilai Tengah |
| 0 - 19 | 100 | 9,5 |
| 20 - 39 | 88 | 29,5 |
| 40 - 59 | 120 | 49,5 |
| 60 - 79 | 130 | 69,5 |
| 80 - 99 | 150 | 89.5 |
| 100 - 119 | 70 | 109,5 |
| **∑** | 658 | - |

Berdasarkan data di samping, hitunglah:

1. Nilai jarak (*range*)

R = nilai tengah kelas terakhir–nilai tengah kelas pertama =109,5 -9,5 = 100

R = tepi kelas atas kelas terakhir–tepi kelas bawah kelas pertama = 119,5 – (-0,5) = 120

1. Nilai rata-rata hitung, modus, dan median

Rata-rata

|  |  |  |  |
| --- | --- | --- | --- |
| Pengeluaran per hari (ratusan ribu Rupiah) | Fi | Xi | Fi \* Xi |
| 0 - 19 | 100 | 9,5 | 950 |
| 20 - 39 | 88 | 29,5 | 2529 |
| 40 - 59 | 120 | 49,5 | 5940 |
| 60 - 79 | 130 | 69,5 | 9035 |
| 80 - 99 | 150 | 89,5 | 13425 |
| 100 - 119 | 70 | 109,5 | 7665 |
| **∑** | 658 |  | 39611 |



Modus

Letak modus (80-99)

****

Median

Letak Me = 



1. Persentil 85





1. Desil 3





1. Kuatil 1

Kuatil (Pi) = 



1. Standar Deviasi dan Variasi

Standar deviasi

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pengeluaran per hari (ratusan ribu Rupiah) | Fi | Xi | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | |
| 0 - 19 | 100 | 9.5 | -50.7 | 2570.49 | 257049 |
| 20 - 39 | 88 | 29.5 | -30.7 | 942.49 | 82939.12 |
| 40 - 59 | 120 | 49.5 | -10.7 | 114.49 | 13738.8 |
| 60 - 79 | 130 | 69.5 | 9.3 | 86.49 | 11243.7 |
| 80 - 99 | 150 | 89.5 | 29.3 | 858.49 | 128773.5 |
| 100 - 119 | 70 | 109.5 | 49.3 | 2430.49 | 170134.3 |
| **∑** | 658 |  |  | 7002.94 | 663878.42 |



Variansi

1. Koefisien Varian



TUGAS

Berikut adalah data umur karyawan CV Karya Indah yang bergerak di bidang jual beli kendaraan di daerah Bekasi dengan jumlah kariawan 100 orang:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Umur (tahun) | Jumlah Karyawan (%) | | … - … | 15% | | 30 - 39 | 40% | | … - … | 30% | | … - … | 10% | | … - … | 5% | | Hitunglah   * 1. Nilai jarak (*range*)   2. Nilai rata-rata hitung, median, dan modus   3. Nilai desil 4   4. Nilai kuartil 2   5. Nilai presentil 45   6. Nilai standar dev, variansi, dan koefisien variasi |