Tabel Frekuensi Kumulatif Data Berkelompok: *Berat Badan*

Kelompok 2 – XI DKV 2

Anggota Kelompok

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Membuat Powerpoint

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Mengumpulkan data dan mencari jawaban

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Mencari dan membuat rumus - jawaban

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Mencari rumus - jawaban

Nursapika

Mengumpulkan data

Nurul Indah

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Retno Suminar

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Data Berat Badan XI DKV 2

60 60 70 42 45 50 41 45 45 50 55
50 37 47 65 54 37 60 45 42 35 47
36 55 38 52 90 60 65 60 65 60 58
61 57 56 58 60

- **Jangkauan (J) = Data terbesar – data terkecil = 90 – 35 = 55**
- **Banyak kelas (K) = 1 + 3,3 log n = 1 + 3,3 log 38 = 1 + 3,3 (1,5) = 1 + 4,95 = 5,95 = 6**
- **Panjang kelas = J/K = 55/6 = 9,1 = 10**

Nilai	Frekuensi
35 – 44	8
45 – 54	11
55 – 64	14
65 – 74	4
75 – 84	0
85 - 94	1

Mean/ Rata – Rata Data Berkelompok

Nilai	Frekuensi	xi	fi.xi
35 – 44	8	39,5	316
45 – 54	11	49,5	544,5
55 – 64	14	59,5	833
65 – 74	4	69,5	278
75 – 84	0	79,5	0
85 - 94	1	89,5	89,5
	38		**2061**

Rumus = Mean = $\overline{x} = \frac{\sum fi.xi}{\sum F}$ **Mean/ rata – rata = $\overline{x} = \frac{2061}{38}$ = 54,2**

Rumus = ½ (ba + bb)

Median Data Berkelompok

Nilai	Frekuensi
35 – 44	8
45 – 54	11
55 – 64	14
65 – 74	4
75 – 84	0
85 - 94	1
	38

- **Letak median = ½ n = ½ 38 = 19**
- **Tepi bawah kelas = 45 – 0,5 = 44,5**
- **F = 11**
- **∑ Fk = 8**
- **P = 10**

Rumus = Median = $Tb + \left(\frac{\frac{1}{2}n - \sum Fk}{F}\right)$ **P**

Median = $Tb + \left(\frac{\frac{1}{2}n - \sum Fk}{F}\right)$ **P =** $44,5 + \left(\frac{19-8}{11}\right)$ **10 =** $44,5 + \left(\frac{11}{11}\right)$ **10 = 44,5 + 1.10 = 44,5 + 10 = 54,5**

Modus Data Berkelompok

Nilai	Frekuensi
35 – 44	8
45 – 54	11
55 – 64	14
65 – 74	4
75 – 84	0
85 - 94	1

- Tepi bawah kelas = 55 – 0,5 = 54,5
- d1 = 14 – 11 = 3
- d2 = 14 – 4 = 10
- P = 10

Rumus = Modus = $Tb + \left(\frac{d1}{d1 + d2}\right)$ P

Modus = $Tb + \left(\frac{d1}{d1 + d2}\right)$ P = $54,5 + \left(\frac{3}{3+10}\right)$ 10 = $54,5 + \left(\frac{3}{13}\right)$ 10 = 54,5 + $\frac{30}{13}$ = 54,5 + 2,3 = 57,8

Ukuran Letak Data

Nilai	Frekuensi
35 – 44	8
45 – 54	11 → Q1, Q2
55 – 64	14 → Q3
65 – 74	4
75 – 84	0
85 - 94	1
	38

- **Q1 = ¼ n$\overline{\lambda}$ = ¼ 38.1 = 9,5**
- **Q2 = ¼ n$\overline{\lambda}$ = ¼ 38.2 = 19**
- **Q3 = ¼ n$\overline{\lambda}$ = ¼ 38.3 = 28,5**

Rumus = Q = $Tb + \left(\frac{\frac{1}{4}n.\overline{\lambda} - \sum Fk}{F}\right)$ **P**

Letak Kuartil = ¼ n. $\overline{\lambda}$

- **Q1 =** $Tb + (\frac{\frac{1}{4}\ n.\ \overline{\lambda} - \sum Fk}{F})$ **P**

  = 44,5+($\frac{9{,}5 - 8}{11}$ **) 10 = 44,5 + (1,5/ 11) 10**

  = 44,5 + 15/ 11 = 44,5 + 1,3 = 45,8

- **Q2 =** $Tb + (\frac{\frac{1}{4}\ n.\ \overline{\lambda} - \sum Fk}{F})$ **P**

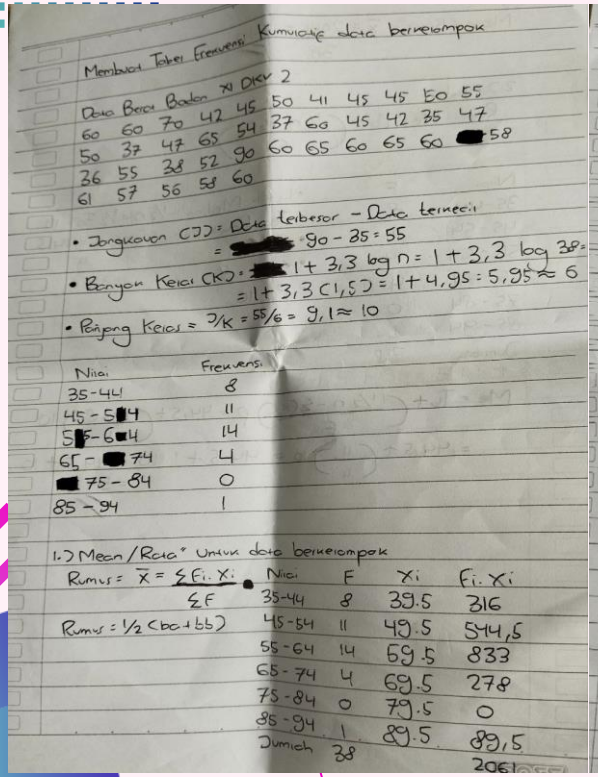
  = 44,5+($\frac{19 - 8}{11}$ **) 10 = 44,5 + (11/ 11) 10**

  = 44,5 + 110/ 11 = 44,5 + 10 = 54,5

- **Q3 =** $Tb + (\frac{\frac{1}{4}\ n.\ \overline{\lambda} - \sum Fk}{F})$ **P**

  = 54,5+($\frac{28{,}5 - 19}{14}$ **) 10 = 54,5 + (9,5/ 14) 10**

  = 54,5 + 95/ 14 = 54,5 + 6,7 = 61,2



Membuat Tabel Frekuensi Kumulatif data berkelompok

Data Berat Badan XI DKV 2

60	60	70	42	45	50	41	45	45	50	55
50	37	47	65	54	37	60	45	42	35	47
36	55	38	52	90	60	65	60	65	60	[redacted]58
61	57	56	58	60						

- Jangkauan (J) = Data terbesar − Data terkecil
  = [redacted] 90 − 35 = 55
- Banyak Kelas (K) = [redacted] 1 + 3,3 log n = 1 + 3,3 log 38
  = 1 + 3,3 (1,5) = 1 + 4,95 = 5,95 ≈ 6
- Panjang Kelas = J/K = 55/6 = 9,1 ≈ 10

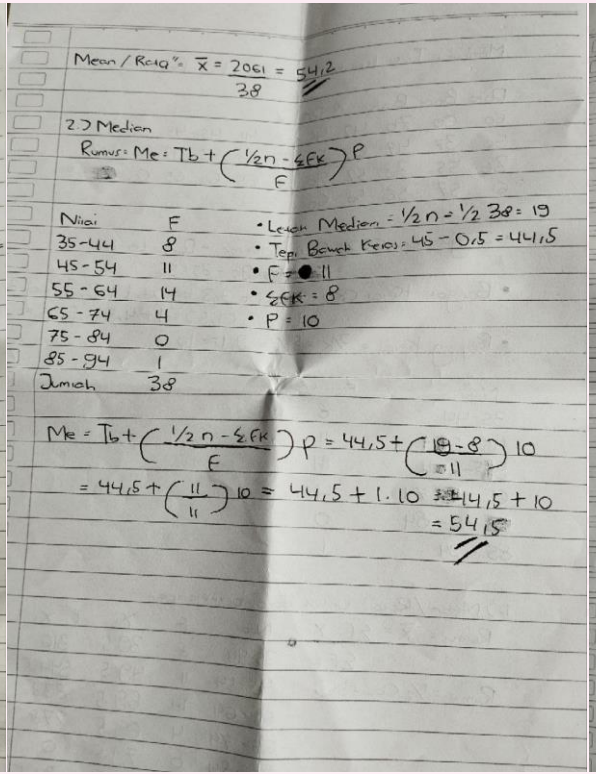
Nilai	Frekuensi
35-44	8
45-5[redacted]4	11
5[redacted]-6[redacted]4	14
65-[redacted]74	4
[redacted]75-84	0
85-94	1

1.) Mean / Rata² untuk data berkelompok

Rumus: $\bar{X} = \frac{\sum Fi.Xi}{\sum F}$

Rumus: $\frac{1}{2}(bc + bb)$

Nilai	F	Xi	Fi.Xi
35-44	8	39.5	316
45-54	11	49.5	544,5
55-64	14	59.5	833
65-74	4	69.5	278
75-84	0	79.5	0
85-94	1	89.5	89,5
Jumlah	38		2061



Mean / Rata² $\bar{X} = \frac{2061}{38} = 54,2$

2.) Median

Rumus: $Me = Tb + \left(\frac{\frac{1}{2}n - \sum FK}{F}\right) P$

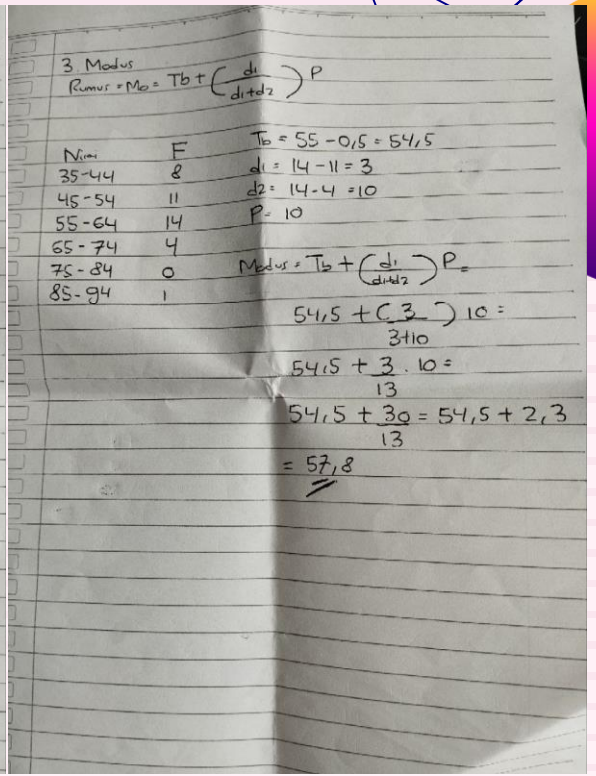
Nilai	F
35-44	8
45-54	11
55-64	14
65-74	4
75-84	0
85-94	1
Jumlah	38

- Letak Median = $\frac{1}{2}n = \frac{1}{2}38 = 19$
- Tepi Bawah Kelas = 45 − 0,5 = 44,5
- F = [redacted] 11
- $\sum FK = 8$
- P = 10

$Me = Tb + \left(\frac{\frac{1}{2}n - \sum FK}{F}\right) P = 44,5 + \left(\frac{19-8}{11}\right) 10$

$= 44,5 + \left(\frac{11}{11}\right) 10 = 44,5 + 1.10 = 44,5 + 10$

$= 54,5$



3 Modus

Rumus: $Mo = Tb + \left(\frac{d_1}{d_1+d_2}\right) P$

Nilai	F
35-44	8
45-54	11
55-64	14
65-74	4
75-84	0
85-94	1

$Tb = 55 - 0,5 = 54,5$

$d_1 = 14 - 11 = 3$

$d_2 = 14 - 4 = 10$

$P = 10$

$Modus = Tb + \left(\frac{d_1}{d_1+d_2}\right) P =$

$54,5 + \left(\frac{3}{3+10}\right) 10 =$

$54,5 + \frac{3}{13} \cdot 10 =$

$54,5 + \frac{30}{13} = 54,5 + 2,3$

$= 57,8$

Thanks!