**LKS2**

STATISTIKA

Kelas :

Nama anggota : ...

 ...

...

SK : Menggunakan aturan statistika dalam pemecahan masalah

KD : Menentukan ukuran pemusatan data

Indikator :1. Menentukan mean

2. Menentukan median

3. Menentukan modus

Tujuan : 1. Menentukan mean

2. Menentukan median

3. Menentukan modus

1. Mean
* Tunggal

Misalkan terdapat data berukuran n dengan nilai – nilai x1, x2, x3, ... , xn maka

Rataan ($\overbar{x}$) = $\frac{x\_{1}+x\_{2}+x\_{3}+ … +x\_{n}}{n}$

=$\frac{1}{n}(x\_{1}+x\_{2}+x\_{3}+ … +x\_{n})$

Contoh :

Nilai ulangan IPA dari 10 siswa MAN 1 Bandung adalah 80, 90, 90, 80, 70, 70, 60, 80, 85, dan 95. Hitunglah rata – rata nilai mereka !

Jawab ...

$\overbar{x}$ = $\frac{80+90+… +…+…+…+…+…+…+95}{10}$

=$\frac{}{}= $

* Kelompok

Diberikan data berikut

|  |  |
| --- | --- |
| Data | F |
| 31 – 36  | 8 |
| 37 – 42 | 7 |
| 43 – 48  | 13 |
| 49 – 54 | 10 |
| 55 – 60  | 12 |
| Jumlah  | 50 |

 Isilah tabel di bawah ini

|  |  |  |
| --- | --- | --- |
| Data | Xi | f |
| 31 – 36 | 33.5 | 8 |
| 37 – 42 | ... | 7 |
| 43 – 48 | ... | 13 |
| 49 – 54 | ... | 10 |
| 55 – 60 | ... | 12 |

Rataan ($\overbar{x}$) = $\frac{x\_{1}f\_{1}+x\_{2}f\_{2}+x\_{3}f\_{3}+ … +x\_{n}f\_{n}}{f\_{1}+f\_{2}+f\_{3}+…+f\_{n}}$

=$\frac{\sum\_{i=1}^{n}X\_{i}. f\_{i}}{\sum\_{i=1}^{n}f\_{i}}$

=$\frac{\left(33,5x8\right)+ \left(…x7\right)+\left(…x…\right)++\left(…x…\right)++\left(…x…\right)}{8+7+…+…+…}$

=$\frac{…+…+…+…+…}{50}$

=

Jadi Mean (rataan) adalah ........................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

1. Median
* Tunggal

Ukuran pemusatan ini digunakan untuk membagi dua sekumpulan data yang sudah diurutkan, misalkan diberikan data sebagai berikut:

9 6 5 3 5 9 0 2 3 4 6 5

Maka,

1. Urutkan

0 2 3 3 4 5 5 5 6 6 9 9

Data Genap:
$$Me=\frac{Data ke \frac{n}{2}+data ke \frac{n}{2}+1}{2}$$

$$ $$

Data Ganjil:
$$Me=data ke\frac{n+1}{2}$$

$$ $$

* Kelompok

Diberikan data berikut :

|  |  |
| --- | --- |
| data | F |
| 31 – 36  | 8 |
| 37 – 42 | 7 |
| 43 – 48  | 13 |
| 49 – 54 | 10 |
| 55 – 60  | 12 |
| Jumlah  | 50 |

Isilah tabel berikut :

|  |  |  |  |
| --- | --- | --- | --- |
| data | Xi | f | Fkme |
| 31 – 36 | 33.5 | 8 | 8 |
| 37 – 42 | ... | 7 | 15 |
| 43 – 48 | ... | 13 | ... |
| 49 – 54 | ... | 10 | ... |
| 55 – 60 | ... | 12 | ... |

Jumlah frekuensi (N) = ...

Kelas median = $\frac{1}{2}.N=…$

Kelas median (Q2) pada ... - ...

L = ...

M = L + $\left(\frac{\frac{1}{2}N-FKme}{fme}\right)$.P

= ... + $\left(\frac{… - … }{…}\right)…$

= ... + (...)...

=...

Jadi Median adalah ............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

1. Modus
* Tunggal

Tentukan modus dari data di bawahini.

 2, 1, 4, 1, 1, 5, 7, 8, 9, 5, 5, 10

Jawab

1. urutkan data tersebut

 1, ..., ..., ..., ..., ..., ..., ..., ..., ..., ...,10

2. buatlah kesimpulan

Data yang sering muncul adalah 1 dan ..., jadi modusnya adalah ...

* Kelompok

Diketahui data :

|  |  |  |
| --- | --- | --- |
| data | Xi | f |
| 31 – 36 | 33.5 | 8 |
| 37 – 42 | ... | 7 |
| 43 – 48 | ... | 13 |
| 49 – 54 | ... | 10 |
| 55 – 60 | ... | 12 |

 Kelas modus ada pada kelas yang berfrekuensi terbanyak yaitu 43 – 48 maka nilai (modusnya) adalah

L = ...

$d\_{1}$= ...

$d\_{2}$= ...

Mo = L + $\left(\frac{d\_{1}}{d\_{1}+ d\_{2}}\right)p$

Mo = ...+ $\left(\frac{…}{…+ …}\right)…$

Mo = ... + ( ... ) ...

Mo = ... + ...

Mo = ...

Jadi Modus adalah ............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................