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TPM /

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(histogram) 가
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(2)

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(3)

< 1>
5.6±0.6(g)

< 1> (: g)

4.7	4.9	5.1	5.7	5.9	4.7	5.4	5.5	5.8	5.1
5.2	5.3	5.4	5.0	5.1	5.2	6.0	5.4	5.1	5.3
5.5	5.7	4.7	5.3	5.4	5.5	5.3	5.6	5.8	5.6
4.9	5.1	5.2	5.7	5.9	4.8	5.3	5.1	5.3	5.3
5.3	5.4	5.5	5.0	5.2	5.3	5.6	5.8	5.0	5.6

1 : data $n = 50$

2 : (L : Largest value) (S : Smallest value)
 $L = 6.0, S = 4.7$

3 : (k)

$$k = \sqrt{n}$$

)

$$k = \sqrt{n} = \sqrt{50} = 7.1 \approx 7$$

(k) (H.A. Sturges)가

$$k = 1 + 3.3 \log n$$

(k)

$$k = 1 + 3.3 \log n = 1 + 3.3 \log 50 = 1 + 5.6 = 6.6 \approx 7$$

4 : (h)

$$h = \frac{L - S}{k} = \frac{6.0 - 4.7}{7} = 0.19 \approx 0.2$$

(0.1 0.1 × 2 = 0.2)

5 :

$$1 \quad = S - \frac{0.1}{2} = 4.7 - \frac{0.1}{2} = 4.65$$

$$1 \quad = 1 \quad + h = 4.65 + 0.2 = 4.85$$

$$2 \quad = 1 \quad + h = 4.85 + 0.2 = 5.05$$

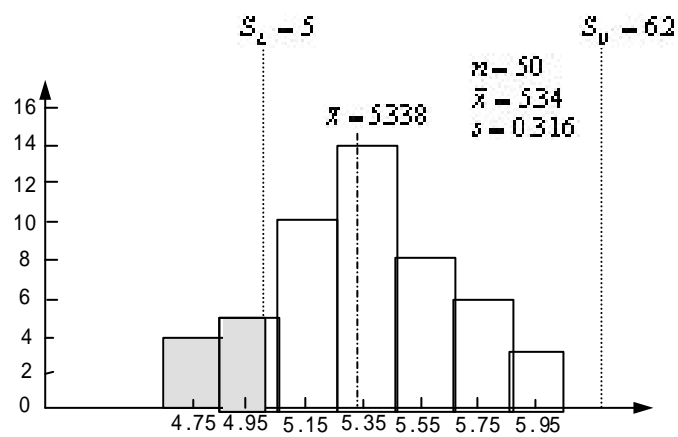
6 : (, < 2>)

< 2>

No.		(x_i)		f	u	fu	fu^2
1	4.65 4.85	4.75	////	4	-3	-12	36
2	4.85 5.05	4.95	////	5	-2	-10	20
3	5.05 5.25	5.15	//// //	10	-1	-10	10
4	5.25 5.45	5.35	//// //	14	0	0	0
5	5.45 5.65	5.55	//// //	8	1	8	8
6	5.65 5.85	5.75	//// /	6	2	12	24
7	5.85 6.05	5.95	///	3	3	9	27
	-	-		50		-3	125

u 가 0 .

7 : .(1)



< 1>

8 : \bar{x} , s .

$$\bar{x}$$

$$\bar{x} = x_0 + \frac{\sum fu}{\sum f} \times h$$

,

$$\bar{x} = x_0 + \frac{\sum fu}{\sum f} \times h = 5.35 + \frac{-3}{50} \times 0.2 = 5.338 \approx 5.34$$

s .

$$s = \sqrt{\frac{S}{\sum f}} = \sqrt{\frac{\{\sum fu^2 - (\sum fu)^2 / \sum f\} h^2}{\sum f}}$$

$$= h \sqrt{\frac{\sum fu^2}{\sum f} - \left(\frac{\sum fu}{\sum f} \right)^2}$$

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$$\therefore s = 0.2 \sqrt{\frac{125}{50} - \left(\frac{-3}{50} \right)^2} = 0.316$$

$$, \quad V \quad \sqrt{V} \quad (s \approx \sqrt{V})$$

.

$$\sqrt{V} = h \sqrt{\frac{\sum fu^2 - (\sum fu)^2 / \sum f}{\sum f - 1}} = 0.2 \sqrt{\frac{125 - (-3)^2 / 50}{50 - 1}} = 0.319$$

9 :

$$n, \quad \bar{x}, \quad s$$