## MUSTAFA CAN ÇALIŞKAN 150200097 MAT271E HW1

```
Stem leaf

32  1 5 6 7 8 9

33  1 1 4 5 6 6 6 6 6 8 8

34  0 1 1 1 2 2 3 5 5 6 6 6 6 6 7 7 7 7 7 7 7 9

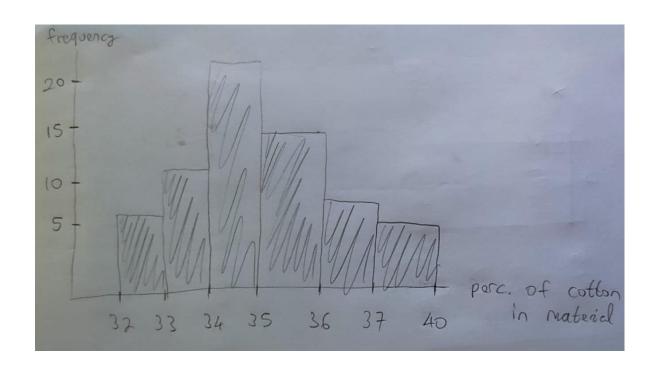
35  0 0 1 1 1 2 3 4 4 5 6 7 8 9

36  2 3 4 6 8 8 8

37  1 3 6 8 9

Keg = 32 1 1 means 32.1
```

2	class interval	frequence	relative frequency	cumulative relative frequency
	32 - under 33	6	0.09	0.09
	33 - under 34 34 - under 35	21	0.17	0.59
	35 - under 36	14	0.22	0.81
	36-under 37 37-under 40	5	0.08	1



3) a) sample mean = 
$$\frac{\sum_{i=1}^{1} x_i}{n} = \frac{1155}{24} = 48.125$$
  
Sample median =  $(x_{12} + x_{13})/2 = 49$   
b) sample volunce =  $\frac{\sum_{i=1}^{1} (x_i - mean)}{n-1} = \frac{166.625}{23} = 7.245$   
Sample standard dev. =  $\sqrt{7.245} = 2.690$ 

c) 
$$5^{th} = \frac{5}{100} \cdot 24 = 1.2 \rightarrow \text{round up} \rightarrow 2.\text{ position}$$

$$44$$

$$95^{th} = \frac{95}{100} \cdot 24 = 22.8 \rightarrow \text{round up} \rightarrow 23.\text{ position}$$

$$52$$

$$7$$

K1		- : >	< 🗸	fx =AV	/ERAGE(A1:	H3)					
4	Α	В	С	D	Е	F	G	Н	1	J	K
1	43	47	51	48	52	50	46	49		Mean:	48.125
2	45	52	46	51	44	49	46	51		Median:	49
3	49	45	44	50	48	50	49	50		Variance:	7.244565
4										Std. Dev.:	2.691573
5										5th Percentile:	44
6										95th Percentile:	52
K2											
$\mathbf{A}$	Α	+ : 2	× •	<i>f</i> x =M	EDIAN(A1:I	H3)	G	Н	1	J	K
1	A 43						G 46	H 49	1	J Mean:	K 48.125
1 2		В	С	D	E	F			I		
	43	B 47	C 51	D 48	E 52	F 50	46	49	l	Mean:	48.125
2	43 45	B 47 52	51 46	D 48 51	E 52 44	F 50 49	46 46	49 51	I	Mean: Median:	48.125 49
2 3	43 45	B 47 52	51 46	D 48 51	E 52 44	F 50 49	46 46	49 51	1	Mean: Median: Variance:	48.125 49 7.244565

K3		T	< ~	$f_x$ =VA	R.S(A1:H3)						
	Α	В	С	D	Е	F	G	Н	1	J	K
1	43	47	51	48	52	50	46	49		Mean:	48.125
2	45	52	46	51	44	49	46	51		Median:	49
3	49	45	44	50	48	50	49	50		Variance:	7.244565
4										Std. Dev.:	2.691573
5										5th Percentile:	44
6										95th Percentile:	52
7											

K4		<u> </u>	· ·	Jx = SII	DEV.S(A1:H	3)					
	Α	В	С	D	Е	F	G	Н	1	J	K
1	43	47	51	48	52	50	46	49		Mean:	48.125
2	45	52	46	51	44	49	46	51		Median:	49
3	49	45	44	50	48	50	49	50		Variance:	7.244565
4										Std. Dev.:	2.691573
5										5th Percentile:	44
6										95th Percentile:	52
7											

<b>(</b> 5		- : ×	< V	$f_x$ =PEF	TOETTTIEETT	110(/11/11/15)					
4	Α	В	С	D	Е	F	G	Н	1	J	K
	43	47	51	48	52	50	46	49		Mean:	48.125
2	45	52	46	51	44	49	46	51		Median:	49
	49	45	44	50	48	50	49	50		Variance:	7.244565
										Std. Dev.:	2.691573
										5th Percentile:	44
										95th Percentile:	52
										John Creentile.	
K6	Δ		× •			EXC(A1:H3,		н			
K6	A 43	B 47	C 51	f <sub>x</sub> =PE	ERCENTILE.  E  52	EXC(A1:H3,	0.95) G 46	H 49	I	J Mean:	K
K6		В	С	D	Е	F	G		1	J	K 48.125
K6	43	B 47	C 51	D 48	E 52	F 50	G 46	49	1	J Mean:	K 48.125 49
K6	43 45	B 47 52	51 46	D 48 51	52 44	F 50 49	G 46 46	49 51		J Mean: Median:	
K6 1 2 3	43 45	B 47 52	51 46	D 48 51	52 44	F 50 49	G 46 46	49 51	I	J Mean: Median: Variance:	K 48.125 49 7.244565

diameter	fæg.	class mid.	cum, nom of	cases
35-39	6	37	6	
40-44	12	42	18	
45-49	15	47	33	
	10	52	43	
50-54	7	57,5	50	
55 - 60		27,2		

$$\bar{X} = \frac{\sum_{i=1}^{k} f_{i} M_{i}}{n}$$

$$\bar{X} = \frac{6.37 + 12.42 + 19.47 + 10.52 + 7.57,5}{50} = 47.07$$

median = 
$$4$$
 +  $6$  +  $4$  =  $45$  +  $\frac{7}{15}$  .  $4$ 

45 (lower lim, of the class that contains median 25)

The dian 25)

20th percentile = 
$$(3)$$
 +  $(3)$   $=$  50 +  $\frac{7}{10}$  . 4  
0.8.50=40  $=$  50 (lower limit of the class that contains softh percentile)

$$variance = \sum_{i=1}^{k} f_i (M_i - \overline{X})^2$$

$$Northernoon = \sum_{i=1}^{k} f_i (M_i - \overline{X})^2$$

Sum =  $6(37-47.07)^{2}+12(42-47.07)^{2}+15(47-47.07)^{2}$   $+10(52-47.07)^{2}$   $+7(57.5-47.07)^{2}$ Variance =  $\frac{Sum}{50-1} = 23.67$ Std. dev =  $\sqrt{23.67} = 4.87$