(2.6) 1

a. categorical – Qualitative – Nominal

b. numerical – Quantitative – discrete

c. categorical – Qualitative – Nominal

d. categorical – Qualitative – Ordinal

(2.10.) 2.

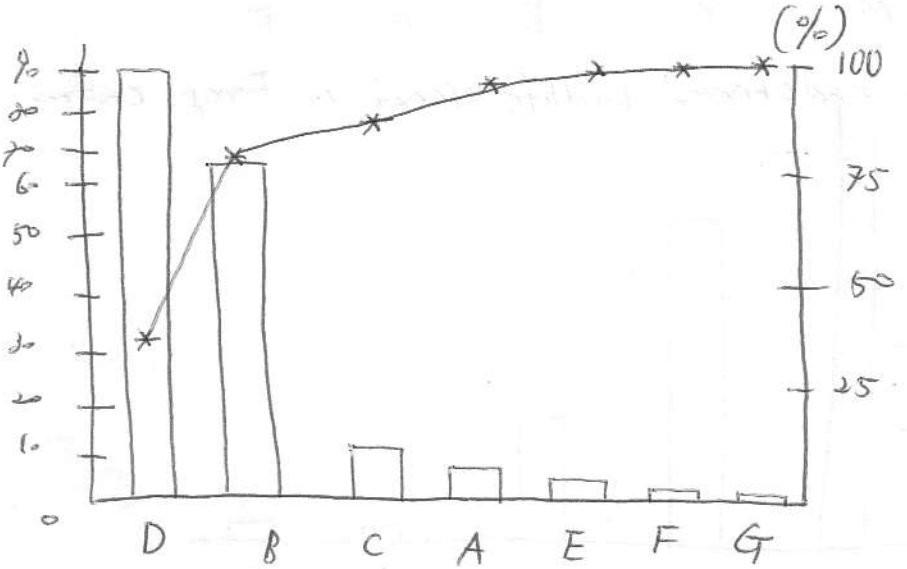
Defect code	Freq.
A	10
B	70
C	15
D	90
E	8
F	4
G	3

⇒

Re-order

Defect code	Freq	% of total defect	Cumulative %
D	90	90/200 = 45	45
B	70	= 70/200 *100% = 35	80
C	15	= 15/200 = 7.5	87.5
A	10	= 10/200 = 5	92.5
E	8	= 8/200 = 4	96.5
F	4	= 4/200 2	98.5
G	3	= 3/200 = 1.5	100.

n = 7 200.

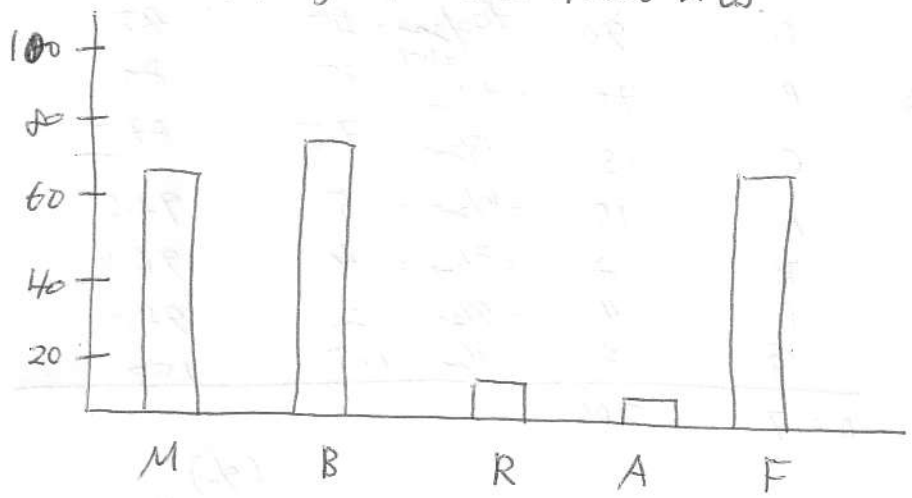


Pareto Diagram

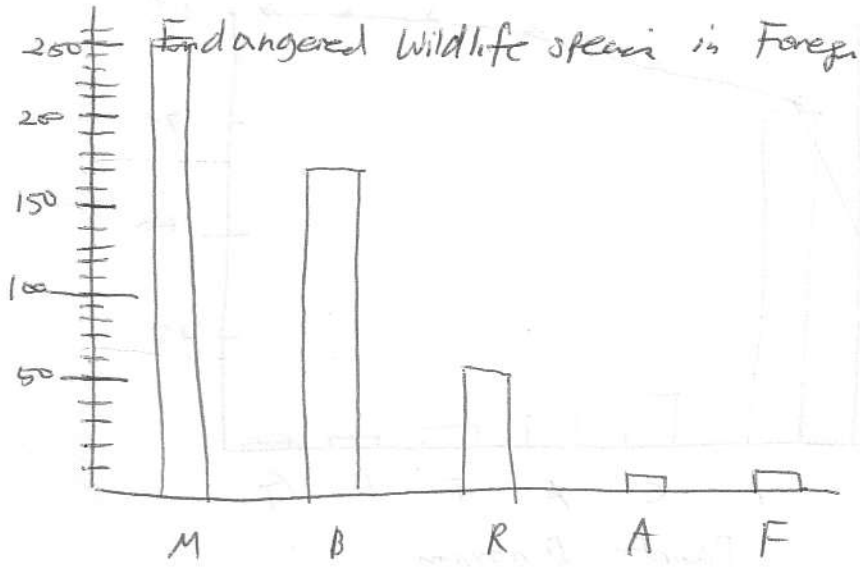
(2.14)
3.

Item	Endangered Wildlife Species in US	Endangered Wildlife Species in Foreign Countries
Mammals (M)	69	251
Birds (B)	77	175
Reptiles (R)	14	64
Amphibians (A)	12	8
Fishes (F)	71	11

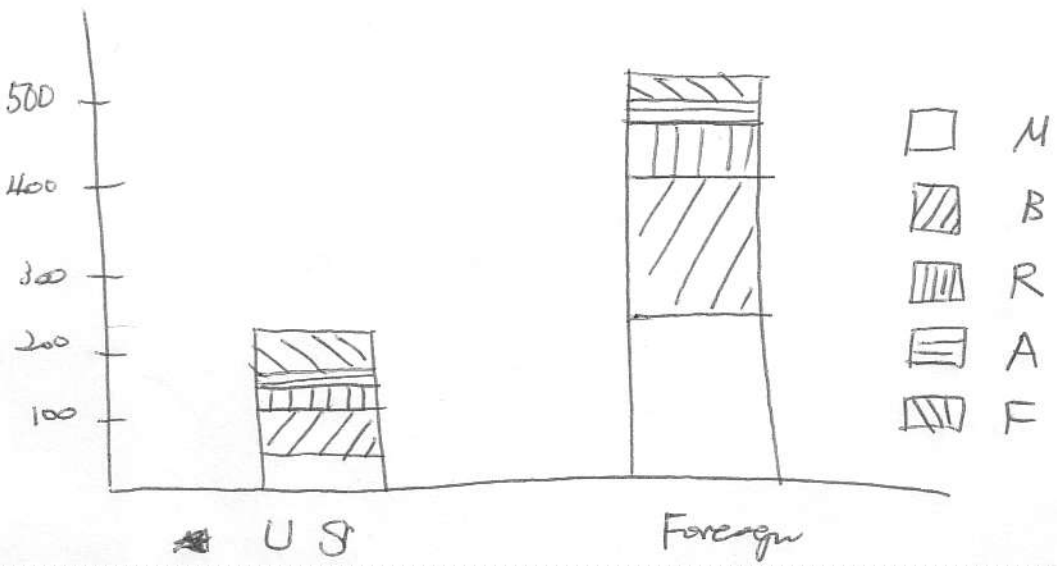
a.



b.



c.

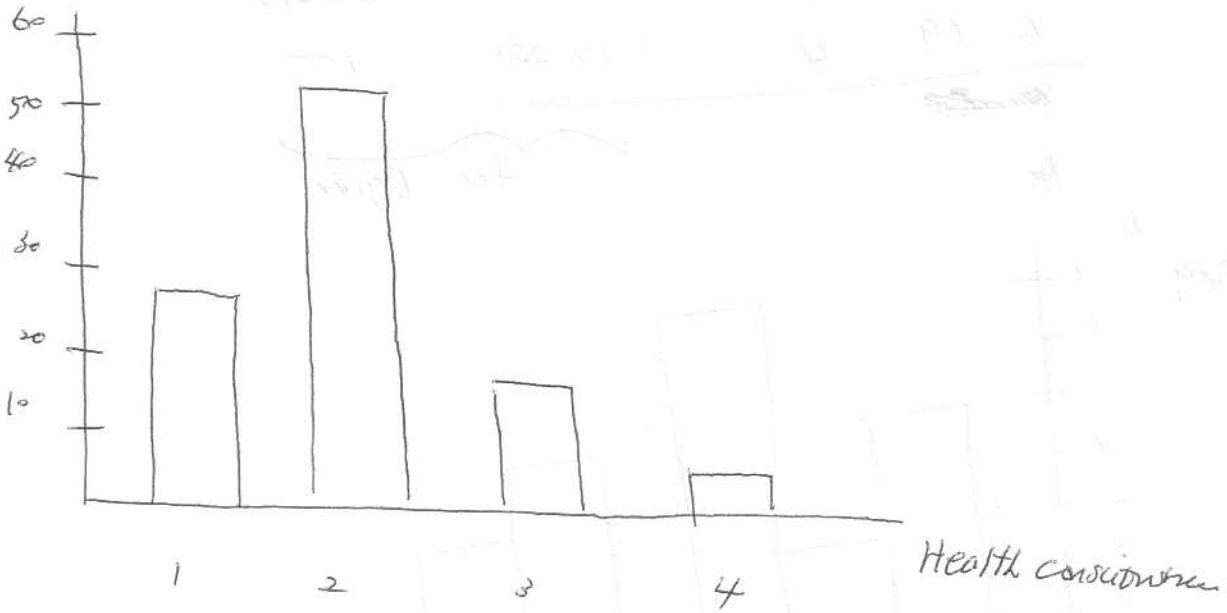


4. (2.34)

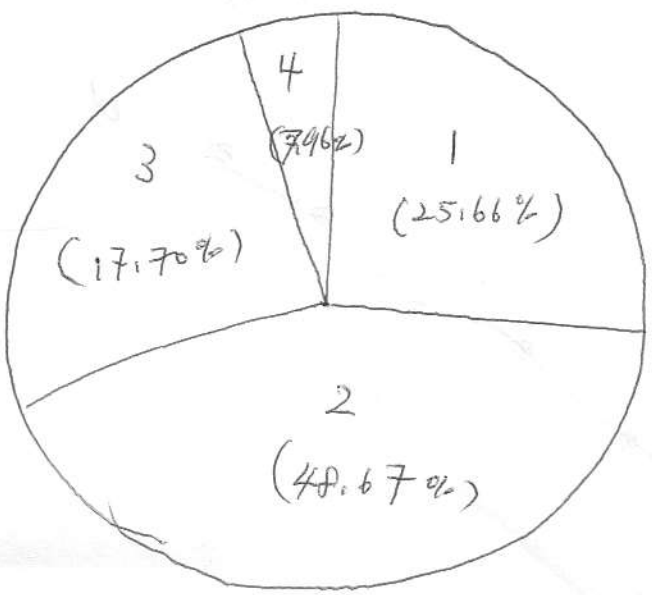
$n = 113$.

Health Consciousness	Counts	Share (%)
1	29	$= 29/113 * 100\% = 25.66$
2	55	$= 55/113 = 48.67$
3	20	$= 20/113 = 17.70$
4	9	$= 9/113 = 7.96$
Total	113	

a.



b.



5. Data (2.32) (Sorted)

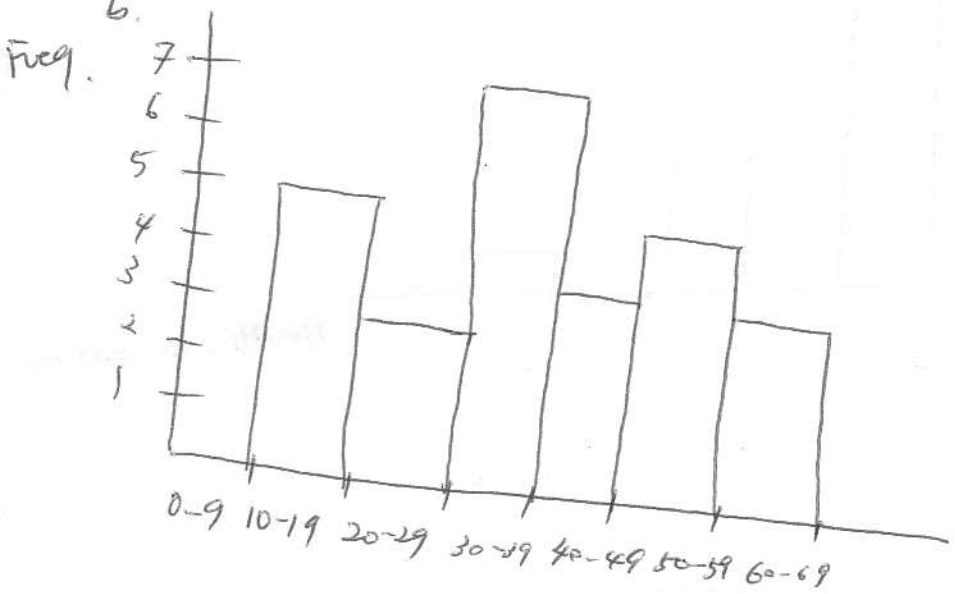
12 13 15 15 17 21 24 28 32 35 36
37 37 39 39 40 41 44 44 51 54 56 59 59
62 64 65 65

a.

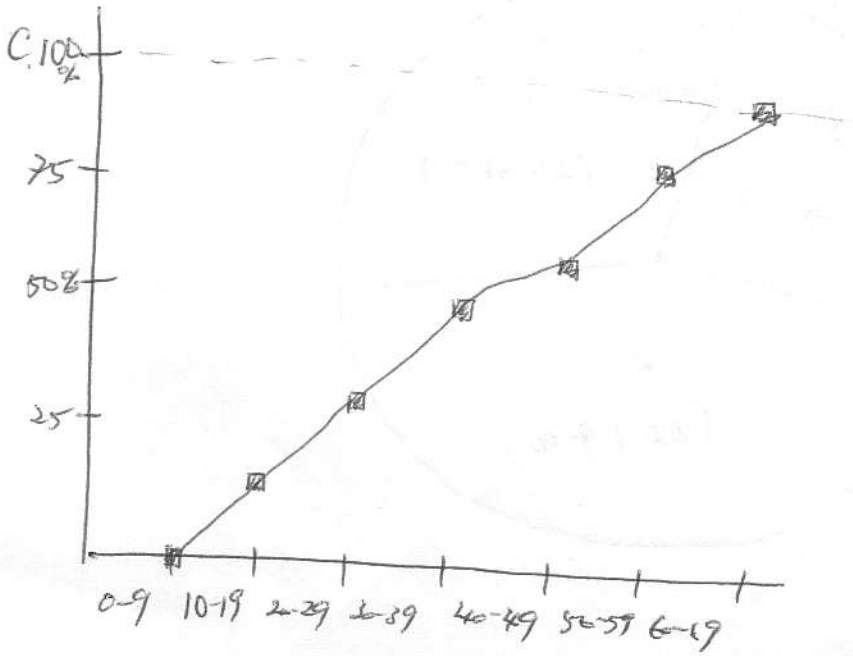
Intervals	Freq.	Relative Freq (%)	Relative Cumulative Freq (%)
10-19	5	17.857	17.857
20-29	3	10.714	28.571
30-39	7	25	53.571
40-49	4	14.286	67.857
50-59	5	17.857	85.714
60-69	4	14.286	100

for Ogive

b.



c.



d.

Stem	Leaf
1	2 3 5 5 7
2	1 4 8
3	2 5 6 7 7 9 9
4	0 1 4 4
5	1 4 6 9 9
6	2 4 5 5

6.

(2.34)

Classes	Frequency	a. (%) Relative Freq	b. Cumulative Freq	c. Relative Cumulative Freq. (%)
$0 < 10$	8	16.33	8	16.33
$10 \leq 20$	10	20.41	18	36.74
$20 \leq 30$	13	26.53	31	63.27
$30 < 40$	12	24.49	43	87.76
$40 < 50$	6	12.24	49	100.00 %
Total	49	100 %		

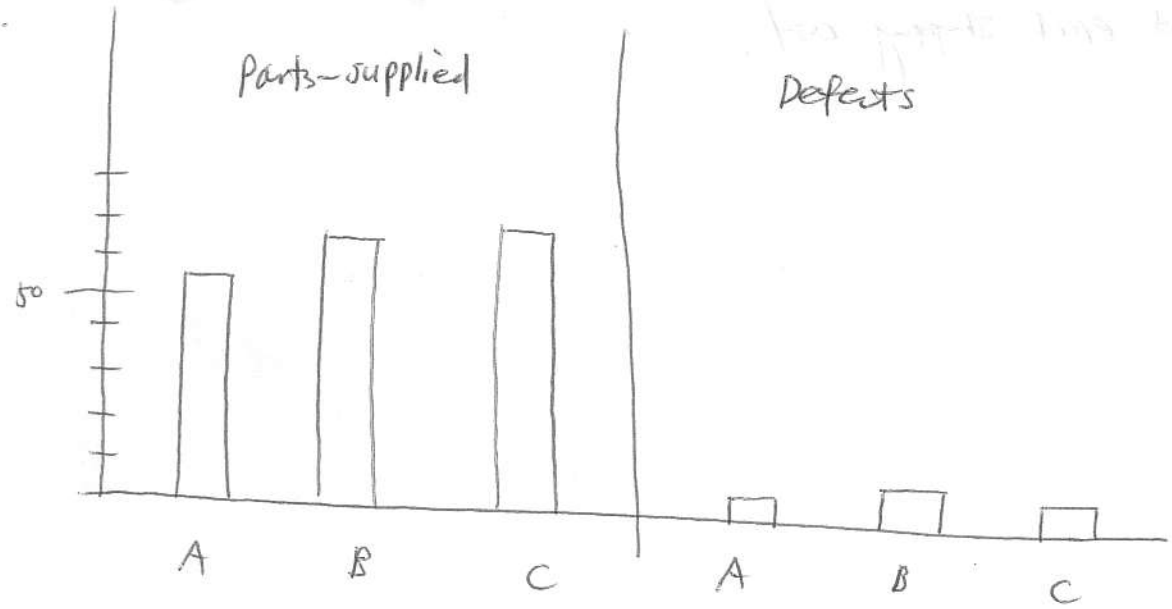
7

(2.42)

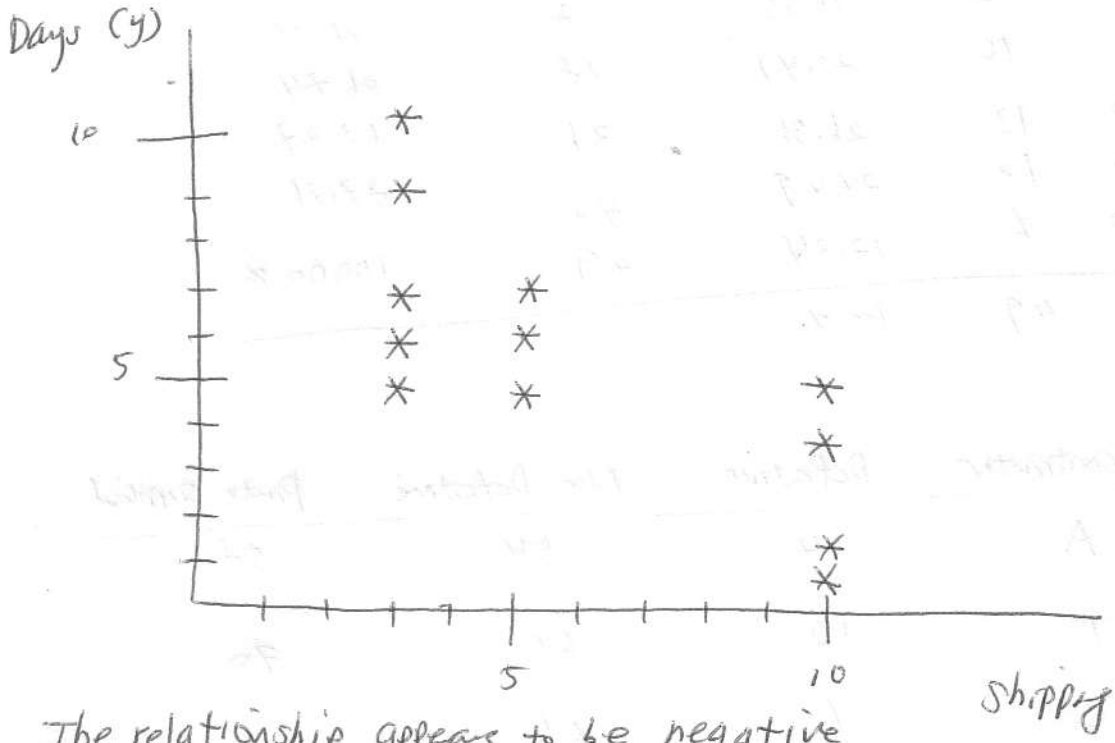
a.

Subcontractor	Defective	Non-Defective	Parts-Supplied
A	4	54	58
B	10	60	70
C	6	66	72
Total	20	180	200

b.



8
(2.44)



The relationship appears to be negative.
(The higher the shipping cost is, the faster the delivery is)
However, there is significant variability in delivery time at each shipping cost.