

Probability and Statistics

Assignment #1.

Section: G1

21i-0669.

Q1.

$$\text{Sample Size } (N) = 2 + 1 + 0 + 6 + 9$$

$$= 24.$$

$$24 \times 6 = \boxed{144}$$

$$N = \boxed{144}.$$

Dataset is from [kaggle:kaggle.com/datasets/thedevastator](https://kaggle.com/datasets/thedevastator)

It represents the life expectancy of individuals in the United States based on their alcohol consumption.

68	14	16	50	62	19	21	60	60	17	69	66
69	79	19	18	63	16	59	64	21	53	47	75
61	58	62	66	70	23	61	57	78	76	23	20
48	69	75	56	77	51	63	17	64	71	18	66
19	68	22	16	69	15	16	18	61	18	26	76
80	72	18	77	21	18	17	64	70	53	86	66
59	25	59	72	25	67	17	17	14	66	18	22
24	21	65	19	52	73	80	65	21	16	18	57
86	39	68	65	15	20	46	64	78	78	66	14
17	59	16	82	52	77	17	15	74	17	64	69
54	72	20	62	49	23	79	68	41	20	57	62
17	75	19	65	17	15	51	65	16	83	54	23

$$\text{Range} = 83 - 14 = \boxed{69}.$$

$$\text{Num classes} = \boxed{6}.$$

$$\text{Class width} = 69 / 6 = 11.5$$

round up.

$$\text{class width} = \boxed{12}.$$

Q1. Continued:

Class Limits	Class Boundaries	f	rf	cf	c.f	c.n.f
10-22	9.5-22.5	46	16	0.31	46	0.31
23-35	22.5-35.5	8	29	0.05	54	0.37
36-48	35.5-48.5	5	42	0.03	59	0.40
49-61	48.5-61.5	22	55	0.15	81	0.56
62-74	61.5-74.5	45	68	0.31	126	0.87
75-87 75-87	74.5-87.5	18	81	0.12	144	1

< C.F	> C.F
46	144
54	98
59	90
81	85
126	63
144	18

Q2.

5	3	6	4	7	2	8	4	8	6
8	4	7	9	5	6	7	9	8	7
4	7	5	4	7	6	5	7	4	4
8	6	7	9	8	9	3	4	7	8
6	4	8	4	3	6	4	7	8	3
6	8	4	6	7	3	8	9	4	4

Values	0	1	2	3	4	5	6	7	8	9
Frequency	5	6	9	6	8	9	8	3	3	3