

Lesson 5.5 - Mid-interval values and upper & lower boundaries

Mid-interval value - the value that is half-way between the upper & lower boundaries of each group or class.

EXAMPLE #1

Fill out the table below for the following data.

Exam mark	1-20	21-40	41-60	61-80	81-100
Number of students	3	5	6	12	8

	Class boundaries	Frequency	Class width	Mid-interval value
1-20	$1 \leq x < 20$	3	19	$\frac{20+1}{2} = 10.5$
21-40	$21 \leq x < 40$	5	19	$\frac{40+21}{2} = 30.5$
41-60	$41 \leq x < 60$	6	19	$\frac{60+41}{2} = 50.5$
61-80	$61 \leq x < 80$	12	19	70.5
81-100	$81 \leq x < 100$	8	19	90.5

EXAMPLE #2

Fill out the table below for the following data.

17.72	16.95	17.07	18.17	22.59	19.54	17.83	25.19	21.68	19.27
23.4	13.85	19.07	21.26	21.3	20.71	18.6	13.84	14.7	16.55
16.65	22.92	20.48	30.58	24.81	17.64	21.04	18.04	13.89	12.02

	Class boundaries	Frequency	Class width	Mid-interval value
$12 \leq x < 16$	12-16	5	4	14
$16 \leq x < 20$	16-20	13	4	18
$20 \leq x < 24$	20-24	9	4	22
$24 \leq x < 28$	24-28	2	4	26
$28 \leq x < 32$	28-32	1	4	30

Lesson 5.6 - Frequency Histograms

Every day at noon, Fingal records the rainfall at his home near Sligo. The rainfall is measured in millimetres. These are his results for July 2012:

87	48	108	69	78	89	18	23	5	13	25	41	32
76	132	136	49	95	105	48	10	15	21	38	49	62
61	42	35	18	14								

Use the data to:

- Complete the frequency table. (8 rows)
- Draw a histogram.

Part A: Frequency Table

Rainfall	Tally	Frequency
5 - 22	 	8
22 - 39	 	5
39 - 56	 	6
56 - 73		3
73 - 90		4
90 - 107		2
107 - 124		1
124 - 141		2

Part B: Histogram

