

2.1 - FREQUENCY DISTRIBUTIONS

Example 1 Create a frequency distribution and a relative frequency distribution for the following Math 146 Exam 1 scores. Use a class width of 5.

42 42 38 42 46 34 40 23 41 38
 39 46 50 49 45 46 36 52 34 43
 44 26 41 45 37

MIN = 23 START AT 20
 MAX = 52

class width : $\frac{52-23}{7} \approx 4.14$ Round up to 5

width $\left\{ \begin{array}{l} 7 \text{ classes} \end{array} \right.$

EXAM SCORE	f
20 - 24	1
25 - 29	1
30 - 34	11
35 - 39	22
40 - 44	22 III
45 - 49	24 I
50 - 54	11

EXAM SCORE	f
20 - 24	1
25 - 29	1
30 - 34	2
35 - 39	5
40 - 44	8
45 - 49	6
50 - 54	2

25

EXAM SCORE	REL. Freq. %
20 - 24	$\frac{1}{25} = 4\%$
25 - 29	4%
30 - 34	8%
35 - 39	20%
40 - 44	32%
45 - 49	24%
50 - 54	8%

100% = 1

CUMULATIVE RELATIVE FREQUENCY DISTRIBUTION

EXAM SCORE	REL. Freq. %
20 - 24	$\frac{1}{25} = 4\%$
25 - 29	4%
30 - 34	8%
35 - 39	20%
40 - 44	32%
45 - 49	24%
50 - 54	8%

EXAM SCORE	CUMULATIVE REL. Freq. %
20 - 24	4%
25 - 29	8%
30 - 34	16%
35 - 39	36%
40 - 44	68%
45 - 49	92%
50 - 54	100%