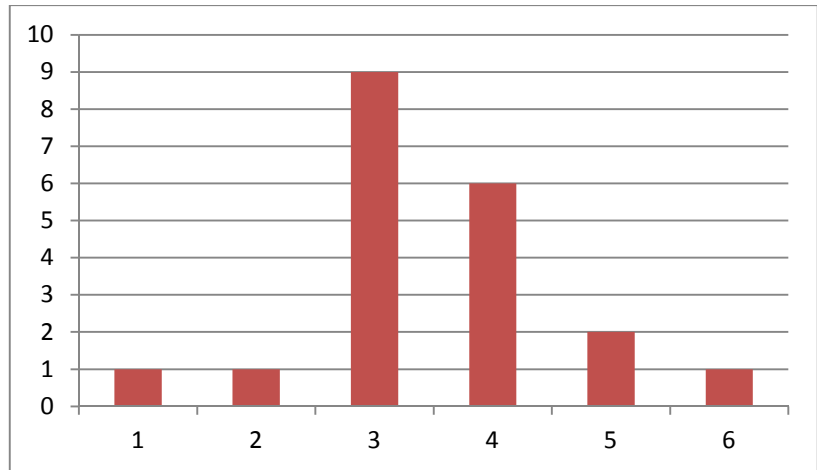
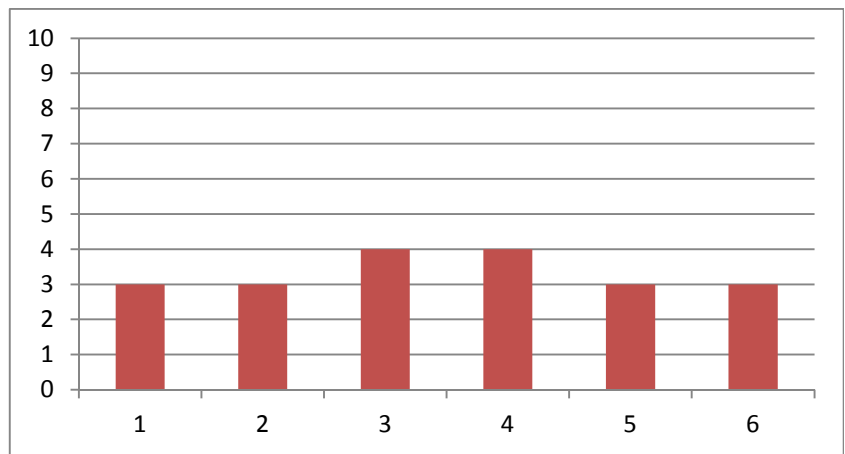


While the range does provide a measure of the spread of variation of a distribution about its centre point, it doesn't distinguish between distributions that are clustered about their centres in a very different manner. Each of the following three distributions has a mean of 3.5 and a range of 5, but the shapes of the distributions vary significantly. Among these distributions, the first one has the smallest standard deviation and the last one has the largest standard deviation.

x	f	$x * f$
1	1	1
2	1	2
3	9	27
4	6	24
5	2	10
6	1	6
	$\Sigma = 20$	$\Sigma = 70$



x	f	$x * f$
1	3	3
2	3	6
3	4	12
4	4	16
5	3	15
6	3	18
	$\Sigma = 20$	$\Sigma = 70$



x	f	$x * f$
1	7	7
2	2	4
3	1	3
4	2	8
5	0	0
6	8	48
	$\Sigma = 20$	$\Sigma = 70$

