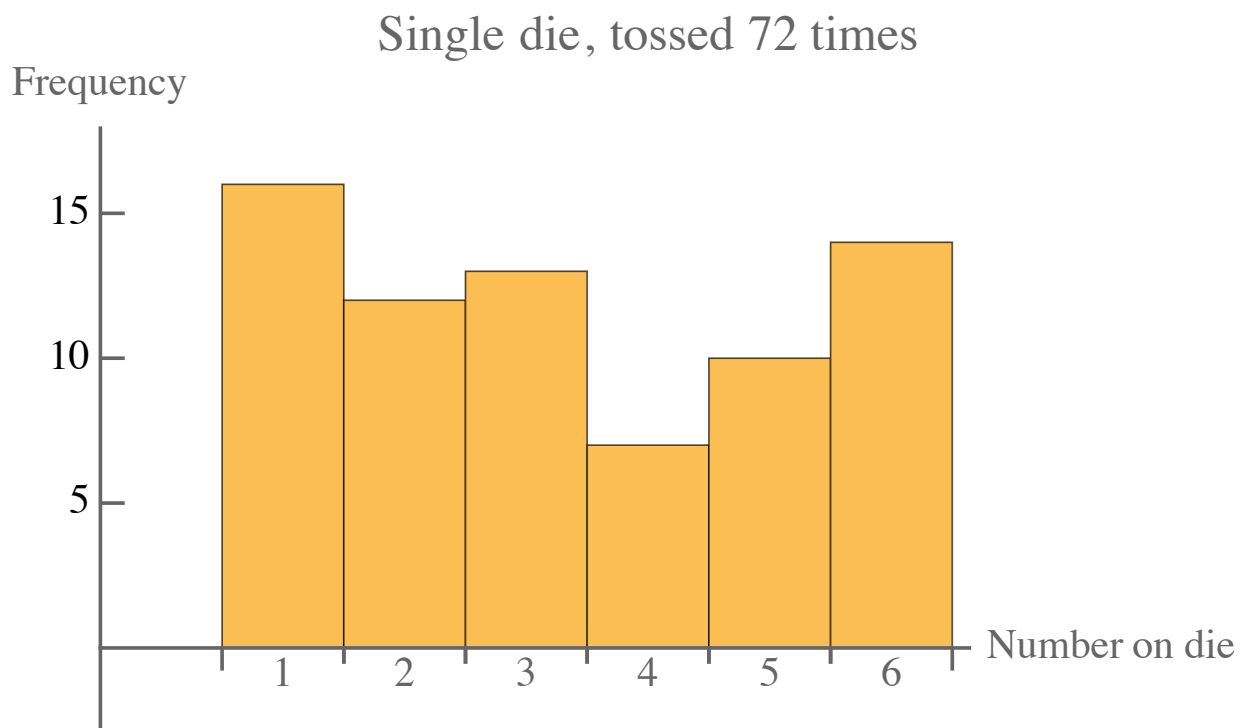


1. Roll a die and, in the table below, put a tally mark in the space representing what number showed up. Repeat this at least 50 times.

Number on one die	Tally
1	16
2	12
3	13
4	7
5	10
6	14

2. On the axes below, draw a histogram representing the above “number on one die” data.



(over)

3. About where (at what number on the horizontal axis) does your “number on one die” data seem to be centered? Explain. (You don’t have to actually compute the average of the values that appeared, though you can if you want.)

The numbers 1, 2, 3 seem to occur more often than the numbers 4, 5, 6, so maybe the center is somewhere around 2.5?

4. Does the “number on one die” data seem to be evenly spread out, or clustered around a single data value? Please explain.

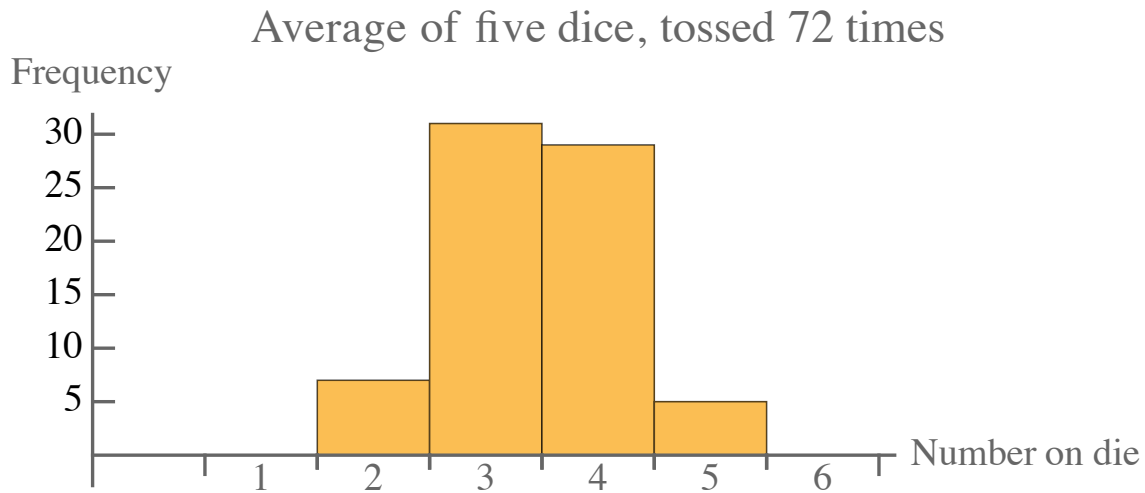
The data does not seem clustered; it’s pretty spread out.

Now do the following. Roll **five** dice, compute the *average* of the five numbers appearing, and, in the table below, put a tally mark in the space representing the average that you got. Round your average up or down: if your average is 3.2 or 3.4, for example, put a mark in the “3” row; if it’s 5.6 or 5.8, put a mark in the “6” row. Repeat this about 25 times.

Average of five dice	Tally
1	0
2	7
3	31
4	29
5	5
6	0

(over)

5. On the axes below, draw a histogram representing the above “average of five dice” data.



6. About where (at what number on the horizontal axis) does your “average of five dice” data seem to be centered? Explain. (You don’t have to actually compute the average of the values that appeared, though you can if you want.)

The “balancing point” seems to be somewhere between 3 and 4, say 3.5.

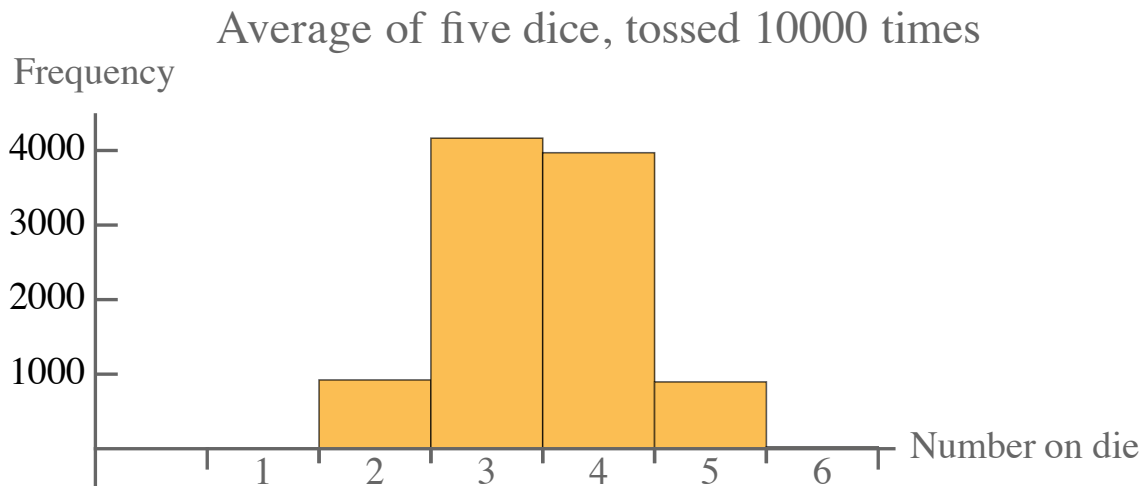
7. Does the “average of five dice” data seem to be more spread out, less spread out, or just about as spread out, compared to the “number on one die” data? Please explain.

The average data seems much less spread out. The data is clustered around its center, whereas the “one die” data isn’t really clustered anywhere.

(over)

8. Describe what you would expect to see if you were to roll your five dice, compute the average, repeat **10,000** times, and draw a histogram of the results.

Maybe something like this?



9. Describe what you would expect to see if you were to roll **50** dice, compute the average, repeat **10,000** times, and draw a histogram of the results.

Maybe something like this?

