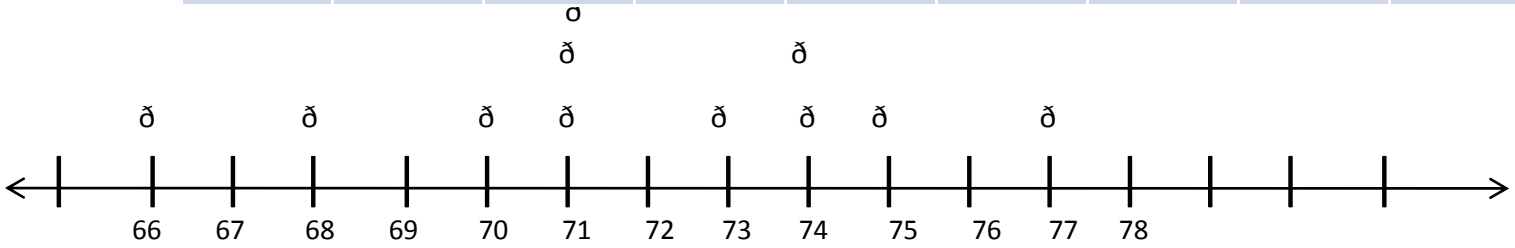
Pages 193, Displaying & Analyzing Data

1. We will use graphs to represent and analyze information
2. Statistics is the study of information, or data. The numbers used to represent the data are also known as statistics.
3. The range is the statistic that is the difference between the greatest and least values in a set of data.
4. The range of the player's heights is the expression 77-66 or 11.
5. The Dot plot is a way to represent a set of data along one axis. Each piece of data is graphed by placing a symbol that represents the information above the corresponding number on a number line.
6. Frequency is the number of times a value occurs in a set of data.
7. Use the dot plot and record the frequency of each height in the chart.

Ht(")	66	68	70	71	73	74	75	77
Freq	1	1	1	3	1	2	1	1



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8. The mode is the statistic that is the most frequently occurring value in a set of data.
9. In the set of data about the heights of the basketball players, the mode is 71.
10. The mean is the statistic that is the sum of the values in data set divided by the number of values in the set.
11. The mean of the height data is = to the fraction 790/11. AS a decimal rounded to the nearest tenth of an inch, this value is 71.8 inches.
12. Does the mean have to be one of the values in the data set? NO. Mean is the number that tells us the average value in the set.
13. The median is the statistic that is the middle number in a set of data that have been arranged in order.

    a. If the number of data points is odd, the median is the median or middle number.

    b. If the number of data points is even, the median is the average or mean, of the 2 numbers in the middle of the ordered data.
14. The x-coordinate in an ordered pair represents a value along the horizontal axis. The y-coordinate represents a value along the vertical axis.
15. A line graph is a way to represent 2 sets of data.

Page 197, looking at change

1. We will explore the law of chance (probability)
2. An outcome is the result of an experiment
3. Outcomes can be represented using a tree diagram
4. Because there are only 2 sides to a coin, when we flip it, there can be only 2 possible outcomes: heads or tails
5. The probability of an outcome which we can write as p(outcome), is the ratio between the number of ways the outcome can occur and the total number of possible outcomes.
6. In the flip of a coin, the probability of getting a head is 1 out of 2 or ½. The probability of getting a tail is ½
7. The frequency of an outcome is the number of times an outcome occurs.
8. The relative frequency is the ratio of the frequency of an outcome to the total number of trials.
9. After a total of 10 flips of a coin, the frequency of heads is 7, and the frequency of tails is 3.

   a) What is the relative frequency of heads? 7/10

   b) What is the relative frequency of tails? 3/10

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10. The sum of the probability of the outcomes of an experiment is 1.
11. A coin is flipped 50 times. The frequency of heads is 28 and frequency of tails is 22. Express the relative frequencies of these outcomes as fractions, decimals and percents.
12. The more times we flip a coin, the closer the relative frequency of an outcome is to the probability of the outcome.
13. What is the number of possible outcomes when we throw a six-sided number cube ? Six. What is the probability of throwing a 4? 1/6
14. A certain outcome is an outcome that is sure to happen. Its probability is 1.
15. The probability of an impossible outcome is 0.
16. The tree diagram represents the possible outcomes in the flip of a coin and the throw of a 6-sided number cube.

a) When we flip a coin, p(Heads) = ½

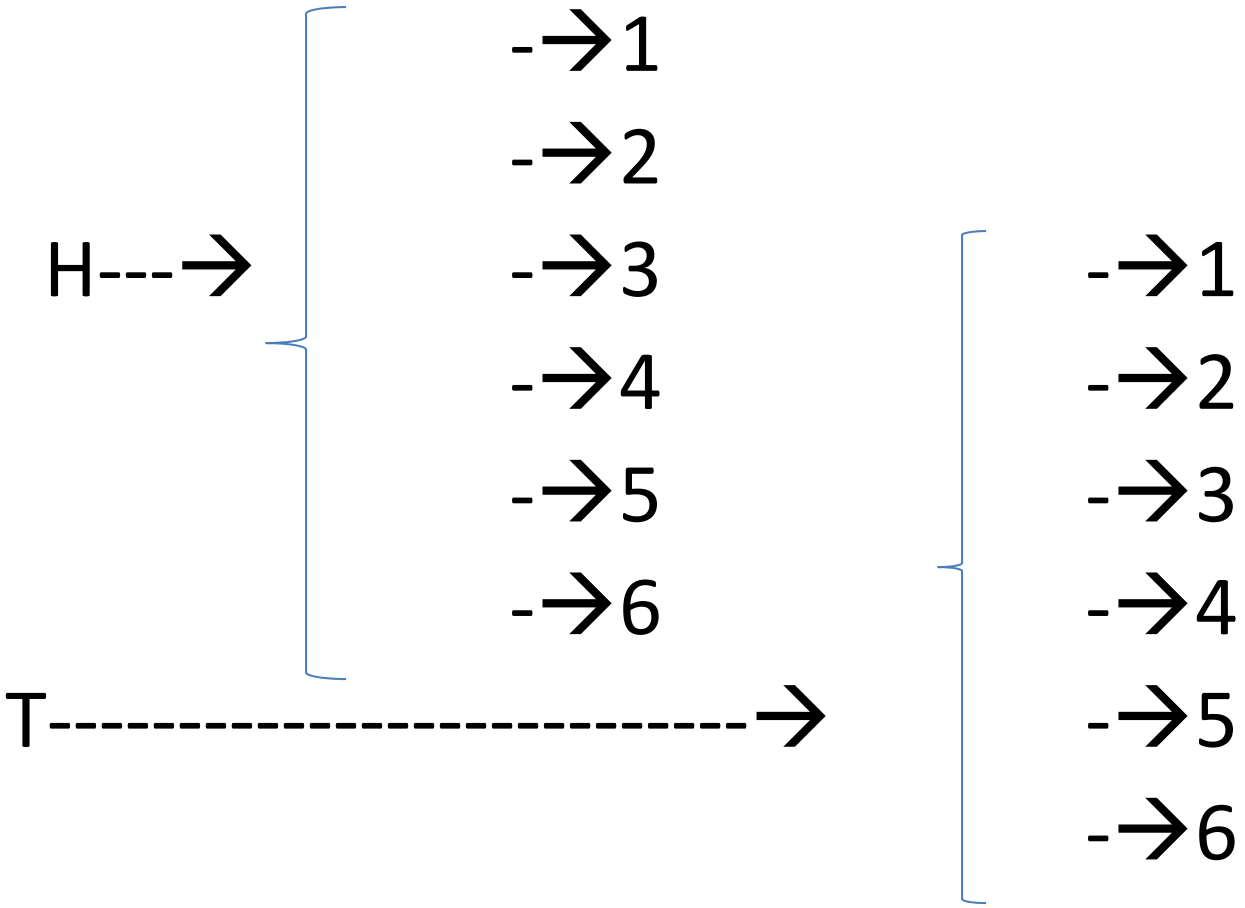
b) When we toss a number cube, P(6) = 1/6

c) So P(Heads, 6) is ½ x 1/6 = 1/12.

17. The probability of 2 independent outcomes is the product of the probability of each outcome.

Freq		Relative	Freq
	Fraction	Decimal	Percent
28	28/50	0.56	56%
22	22/50	0.44	44%

Tree Diagram



Homework Due 4/10

- Math III & IV

Pages 195-196, pages 199-204, all.

- See you next Sunday!