The is due by 1pm on **Friday, October 6, 2017**. Don't forget to e-mail me your spreadsheet.

sumproduct will multiply two list of numbers together and add the products. For example for this list

	A	B	C
1	4	5	10
2	1	3	5
3	3	9	21

=sumproduct(A1:C1,A3:C3) computes $4*3 + 5*9 + 10*21$

Problem 1: A box has 6 red balls and 10 green balls. <u>Three balls are drawn without replacement.</u> Let X be the number of red balls drawn. Compute the expected value for X. Note: I will change the number of red and green when I grade this question.

Problem 2: Create a spreadsheet that will give the expected winnings of a player for the following game. The goal is to have a spreadsheet that you only have to do minimal changes for the different parts
A container holds 10 red items and 12 non-red items. Four items are going to be drawn without replacement. The following table gives the payoff of the number of red balls drawn. Complete the following charts for the **expected net winnings of a player** at the different costs of the game.

red balls drawn	payoff
0	0
1	2
2	5
3	double the cost of the game*
4	triple the cost of the game*

* When you put this in the chart, it should change when you change the cost of the game.

Red	non-red	game cost	$3	$4	$5	$6	$7
10	12	exp. net winnings					

_____Find how much should be charged so that the game is fair.

_____Find how much should be charged (as close as possible) so that the player will expect to lose on average 30 cents each time the game is played.

Now complete the table using the indicated number of red and non-red items.

Red	non-red	game cost	$3	$4	$5	$6	$7
10	15	exp. net winnings					

_____Find how much should be charged (as close as possible) so that the person running the game will expect to make on average 70 cents each time the game is played.