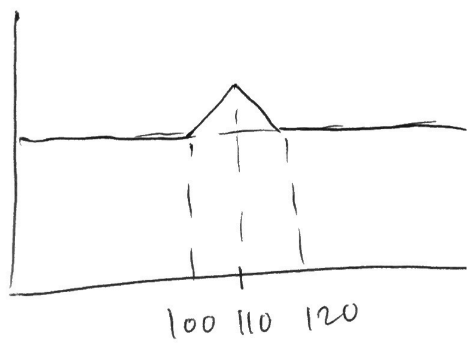
Quiz 4
FN 312

Question 1

Here is an example of a butterfly strategy: simultaneously buy one call with an exercise price of $100, sell two calls with an exercise price of $110, and buy one call with an exercise price of $120.

a. (8 points) Draw out a table and graph for the butterfly strategy, showing the pay off at expiration from the investor's net position.

	$S_T < 100$	$100 \le S_T < 110$	$110 \le S_T \le 120$	$S_T > 120$
buy 1 call (X=100)	0	$S_T - 100$	$S_T - 100$	$S_T - 100$
sell 2 calls (X=110)	0	0	$-2(S_T - 110)$	$-2(S_T - 110)$
buy 1 call (X=120)	0	0	0	$S_T - 120$ 8
	0	$S_T - 100$	$120 - S_T$	0

0


b. (2 points) If the investor carries out the butterfly strategy, what kind of bet is he or she making? How is this different from a straddle strategy that we discussed in class?

A butterfly is a speculation that the price will stay close to the exercise price while a straddle is a speculation that the stock price will have a large movement either up or down (bet on volatility).