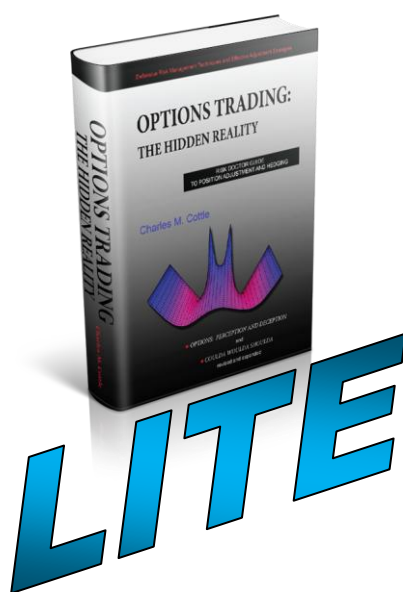


Options Trading: The Hidden Reality *LITE* *5 Part Training Course*

Part 2



By
Charles M. Cottle
RiskDoctor.com

Risk Doctor Answer Key for Part 1 Exercises

1. D

2. C. It is the primary building block for position dissection and D. it identifies the synthetic relationship of calls to puts. Just because the pros make money with it does not mean that retail investors can. Market Makers have cheaper trading costs, favorable money and banking arrangements and faster access to sell on the ask price and buy on the bid price.
3. Maybe, maybe not. You may have a covered write on, and instead of liquidating (when you have incurred enough gain or enough loss or you no longer wish to keep the position), you buy the same strike put (when out-of-the-money with a narrower bid / ask spread) to neutralize further exposure (ending up with a conversion).
4. A reversal or conversion is never really an objective goal to begin with but may often be the quickest, easiest and/or cheapest alternative to removing the exposure of a covered write.
5. No. You need only the basic understanding of the structure and the fact that it is solid enough to use for position dissection purposes for revealing the hidden risks in most option configurations.
6. B. Understanding the synthetic nature of a position faster helps to make faster decisions in trading and risk management. This consciousness will help to become more efficient and effective in trading and managing bull and bear spreads, collars, butterflies, condors, broken wing butterflies, calendars diagonals, double diagonals, straddle strangle swaps and more. All this leads to long term consistent profitability.

The most interesting and useful aspect of the C/R is “synthetics” consciousness. The object is not to trade them, to be like a pro or that C/R should be the objective of a trade. You may end up with one but that should never be the goal.

7. D. They are all virtually identical. Simply, we can arrive at the answers by using the CUP and the x and in this case “i”, for interest which is \$1.00 ($\$100 \times 2 \text{ months} / 365 \times 6\%$). In the image below, you can see that with the stock @ 50 all three positions make the same \$39 and @ 100 they all lose \$11 and at 101, they all lose \$10, while @ 200 they all make \$89.

A. Short 100 Shares @ 100.00, Long 2*100 Calls @ 6.00									
	@ 50		@ 100		@ 101		@ 200		
	TV	P&L	TV	P&L	TV	P&L	TV	P&L	
+2c	0	(12)	0	(12)	1	(10)	100	+ 188	
-1u	50	+ 50	100	0	101	-1	100	(100)	
i*	1	+ 1	1	+ 1	1	+ 1	1	+ 1	
sum		+ 39		(11)		(10)		+ 89	
*i = interest income on \$100 credit for 2 months @ 6%									
B. Long 1 Straddle @ 11.00 (Long 1 * 100 Call @ 6.00 and Long 1*100 Put @ 5.00)									
	@ 50		@ 100		@ 101		@ 200		
	TV	P&L	TV	P&L	TV	P&L	TV	P&L	
+1c	0	-6	0	(6)	1	(5)	100	+ 94	
+1p	50	+ 45	0	(5)	0	(5)	0	(5)	
sum		+ 39		(11)		(10)		+ 89	
C. Long 100 Shares @ 100.00, and Long 2*100 Puts @ 5.00									
	@ 50		@ 100		@ 101		@ 200		
	TV	P&L	TV	P&L	TV	P&L	TV	P&L	
+1u	50	(50)	100	0	101	1	100	+ 100	
+2p	50	+ 90	0	(10)	0	(10)	0	(10)	
i*	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	
sum		+ 39		(11)		(10)		+ 89	
*i = interest expense on \$100 debit for 2 months @ 6%									

Hard to believe but many people pick A, B or C and pay little attention to the prices. They just think in terms of unlimited gain and one of the three is better than the others. Simply, we can arrive at the answers by using the CUP and the x and in this case “i”, for interest which is \$1.00 ($\$100 \times 2 \text{ months} / 365 \times 6\%$).

Actually, the market makers keep everything in line according to their collective models (Chapter 8 stuff – perfect for insomniacs)☺ This is less true in very illiquid contracts.

The middle values (between bid and ask prices) are very close to the amounts used in the example where it is assumed that the interest rate was 6% (that means they receive 4.5% on credit balances and borrow at 7.5%). That is the long way to figure it all out. I am going to teach you to figure it all out, lightening fast, at a glance using Position Dissection (introduced in Day 3).

Stay Tuned for the Next Lesson
Bring your lab coat!
We are going to dissect some options!

Part 2

POSITION DISSECTION – LESSON I

Position dissection (taking out synthetics) works under the premise that locked positions such as conversions, reversals, and boxes can be removed from the position because they are basically flat and can be used as filters to uncover and detect different aspects about a position that may not at first be apparent. Dissection allows the user to alter his or her perception of a position in order to have more information about how to proceed with a trade and measure risk.

Begin by carding up the position, which simply means to write it down. The origin of the word carding comes from the trading floors where many traders still use position cards to keep track of their positions. Some proprietary fully automated electronic systems have screens formatted to look like the old trading cards

There are numerous ways to card up trades and account for position changes, but the format used in this book will be easy to follow and consistent. All positions will be displayed in a **T-Account**¹ format shown in Exhibit 1–3. “Raw” refers to the actual position. “Net” refers to the position after dissection or synthesis.

EXHIBIT 1 – 3

T-Account Format for Displaying Positions

Underlying (U)				
Net Calls	Raw Calls	(+/-)	Raw Puts	Net Puts
(nc)	(rc)		(rp)	(np)
long short	long short		long short	long short
(+) (-)	(+) (-)		(+) (-)	(+) (-)
		Strike 1		
		Strike 2 *		
		Strike 3		
		etc.		
ncc	net call contracts		net put contracts	npc
(+/-)	(+/-)		(+/-)	(+/-)

* It is counterintuitive to list greater strikes in descending order but this has been the traditional way. Some systems allow one to rearrange the sorting so that the highest strikes are listed at the top and descend downward to the lowest strike.

Whichever carding method style best for the individual is fine as long as it is methodical and consistent. It is strongly recommended, however, that in the beginning trades be written down and the synthesis performed by hand even though most traders have access to computers. This promotes understanding and makes it easier to memorize the position.

¹ T-Account

Old fashioned method of bookkeeping displaying debits and credits.

NET CALL CONTRACTS AND NET PUT CONTRACTS

When the market makes a large move in either direction it is very important to know the number of net call contracts (*ncc*) and net put contracts (*npc*) in your position. Why?

If one has net short contracts, then one needs to know the *minimum* number of contracts to buy to shift from unlimited risk to limited risk.

If one has net long contracts, then one needs to know the *maximum* one can sell for taking profits and at the same time not exceeding the number that would shift the position from unlimited gain potential to an unlimited risk position.

Underlying stock or futures positions are included in the count. Net calls are the sum of all the calls, plus any underlying contracts (**add** underlying amount if long the underlying or **subtract** if short the underlying). Net puts are the sum of all the puts, minus any underlying contracts (**subtract** underlying amount if long the underlying or **add** if short the underlying). In other words, while a market crashes a trader wants to know the net amount of puts, including protection of long underlying, that he or she will have to trade to stop the bleeding. When deep in-the-money (ITM) options trade at parity, they may turn into underlying either through exercise or assignment. Put parity options move one to one opposite the underlying, while call parity options move directly with the underlying, one to one.

Take a look at Exhibit 1-4. A position of short one thousand “-1000” underlying gains as much as long ten “+10” parity puts does (once far enough ITM) so that is why the net put contracts sum is positive ten “+10”. Also, a position of short one thousand “-1000” shares of underlying loses as much as a position of short ten “-10” parity calls does (once far enough ITM) so that is why the net call contracts sum is positive “+10” (+20 Oct 50c and -10u).

Net contracts should be tallied at the bottom of each T-Account at each and every dissection stage. This is the first of the checks and balances for possible errors in dissecting positions. If the net contracts from one stage to the next differ, an error has occurred and it must be found before continuing. Without this special check, an error in judgment could lead to false conclusions about the risk in a given position. It is therefore compulsory to check net contracts following each stage of the dissection.

EXHIBIT 1 – 4

+20 Oct 50c / -1000 u As Carded-Up

<i>nc</i>	<i>rc</i>	<i>-1000</i>	<i>rp</i>	<i>np</i>
+ -	+ -		+ -	+ -
	20	50		
	+10 (+20c -10u)		+10 (-10u)	

COMMON LOCKS CARDED UP

In Exhibit 1–5, section A, one can see that a conversion (top) is the exact opposite of a reversal (bottom). Sometimes the spread is referred to by one name: conversion/reversal. Section B shows a long box (top) and short box (bottom). Section C shows a long jelly roll (top) and short jelly roll (bottom). The top jelly roll is regarded as long because it is

long time (long the further dated combo² and short the near term). The opposite is true for the short jelly roll.

EXHIBIT 1 – 5

May 99 Conversion <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 150px;"> <div style="text-align: center;">May +1u</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; width: 33%; text-align: center;">1</td> <td style="width: 33%; text-align: center;">99</td> <td style="border-left: 1px solid black; width: 33%; text-align: center;">1</td> </tr> </table> </div>	1	99	1	Long May 98/99 Box <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 150px;"> <div style="text-align: center;">May</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; width: 33%; text-align: center;">1</td> <td style="width: 33%; text-align: center;">98</td> <td style="border-left: 1px solid black; width: 33%; text-align: center;">1</td> </tr> <tr> <td style="border-right: 1px solid black; text-align: center;">1</td> <td style="text-align: center;">99</td> <td style="border-left: 1px solid black; text-align: center;">1</td> </tr> </table> </div>	1	98	1	1	99	1	Long May/June 99 Jelly Roll <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 150px;"> <div style="text-align: center;">May</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; width: 33%; text-align: center;">1</td> <td style="width: 33%; text-align: center;">99</td> <td style="border-left: 1px solid black; width: 33%; text-align: center;">1</td> </tr> <tr> <td style="border-right: 1px solid black; text-align: center;">1</td> <td style="text-align: center;">June 99</td> <td style="border-left: 1px solid black; text-align: center;">1</td> </tr> </table> </div>	1	99	1	1	June 99	1
1	99	1															
1	98	1															
1	99	1															
1	99	1															
1	June 99	1															
May 99 Reversal <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 150px;"> <div style="text-align: center;">May -1u</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; width: 33%; text-align: center;">1</td> <td style="width: 33%; text-align: center;">99</td> <td style="border-left: 1px solid black; width: 33%; text-align: center;">1</td> </tr> </table> </div>	1	99	1	Short May 98/99 Box <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 150px;"> <div style="text-align: center;">May</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; width: 33%; text-align: center;">1</td> <td style="width: 33%; text-align: center;">98</td> <td style="border-left: 1px solid black; width: 33%; text-align: center;">1</td> </tr> <tr> <td style="border-right: 1px solid black; text-align: center;">1</td> <td style="text-align: center;">99</td> <td style="border-left: 1px solid black; text-align: center;">1</td> </tr> </table> </div>	1	98	1	1	99	1	Short May/June 99 Jelly Roll <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 150px;"> <div style="text-align: center;">May</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; width: 33%; text-align: center;">1</td> <td style="width: 33%; text-align: center;">99</td> <td style="border-left: 1px solid black; width: 33%; text-align: center;">1</td> </tr> <tr> <td style="border-right: 1px solid black; text-align: center;">1</td> <td style="text-align: center;">June 99</td> <td style="border-left: 1px solid black; text-align: center;">1</td> </tr> </table> </div>	1	99	1	1	June 99	1
1	99	1															
1	98	1															
1	99	1															
1	99	1															
1	June 99	1															
Section A	Section B	Section C															

Position Configurations

An examination of the use of a simple conversion or reverse conversion (reversal) to “synthesize out” a different position shows you something about the risk that may not have been perceived before the dissection process.

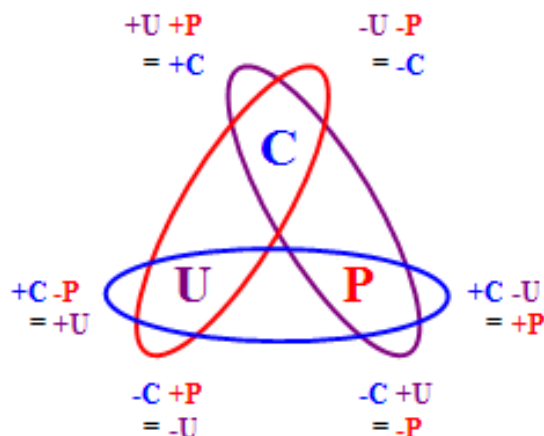
Once the properties of put-call parity are understood, it will be easy to understand that long a call is equal to long underlying and long a put of the same strike ($+c = +u + p$).

If	$+c = +u + p$	then;	$-c = -u - p$
and	$+p = +c - u$	and	$-p = -c + u$
and	$+u = +c - p$	and	$-u = -c + p$

Therefore, a conversion $= +u + p - c = 0$ and
a reversal $= -u - p + c = 0$.

² Combo

Trading jargon for a combination. Usually refers to a same strike call and put “combo” where one is long and the other is short, creating synthetic underlying and is often another term for synthetic stock. The amount of long options and short options nets out to zero. Buying a combo is buying synthetic stock; selling a combo is selling synthetic stock. For example, long a 60 combo is long 1*60 call and short 1*60 put. Another type of combo can consist of options at two different strikes in which case it would not be synthetic stock.



Any of the individual components, **C**, **U** or **P** by itself can be emulated by the other two components, with the plus sign for long and the minus sign for short the conversion/reversal. For example, as illustrated above, the blue **C** on its own equals the **U** and the **P** grouped together in a blue oval. Specifically, when the **+U** and the **+P** are both long (+) it equals a long **+C** (displayed to the upper left of the big blue **C**) and when the **-U** and **-P** are both short (-) they equal a short **-C** (displayed to the upper right of the big blue **C**). The red **P** corresponds to what is in the red oval and the purple **U** corresponds to what is in the purple oval.

TOOLS FOR DISSECTION


There are five tools that can be used for position dissection. Only two will be introduced in this chapter; the SynTool, which sets aside Conversions/Reversals and the BoxTool, which sets aside Boxes.

SynTool BoxTool

Although introduced below, the remaining three will be presented when appropriate; the WingTool that sets aside Butterflies, Condors, Irons, etc., the TimeTool that sets aside Calendar spreads and the JellyRoller that sets aside Jelly Rolls.

WingTool TimeTool JellyRoller

SynTool: Using the SynTool is basically taking out a conversion or a reversal at a single strike which removes the cloudiness that the underlying causes. Everyone should remain cognizant that C/Rs and boxes have some additional, contract-specific risks. These risks should not be ignored because they are still alive, even though they represent a lower priority than the risk that the trader wishes to focus on. The position can be likened to a bunch of fires that need to be contained and then later, put out. Once it has been established where the biggest fire is and it has been contained, lesser fires can be attended to. The trader develops a hierarchy of risks, including C/Rs and boxes, so that the focus remains on the imminent danger, the most risky aspect of his position. The trader may not be able to attend to lower priorities, but at least he or she will be in control of the major risk of the position. One can remove C/Rs from the position with an *imaginary* trade by using a 3-piece SynTool (one for the **C**, one for the **U** and one for the **P**). It may seem strange to do this, especially if there is no complete C/R in the position. When a position is synthesized, the intent is to view that position differently and thereby gain a new awareness for future adjustments. The awareness comes from turning some calls into puts at the same strike, and at another strike turning the puts into calls. Any long underlying (+ *u*) is turned into a long combo meaning (+ *c* - *p*) usually and any (- *u*) is turned into a short combo (- *c* + *p*). The underlying does not always have to be changed into a combo. Sometimes a (+ *c*) may be turned into a (+ *u* + *p*), or a (+ *p*) into a (+ *c* - *u*) depending on the situation.

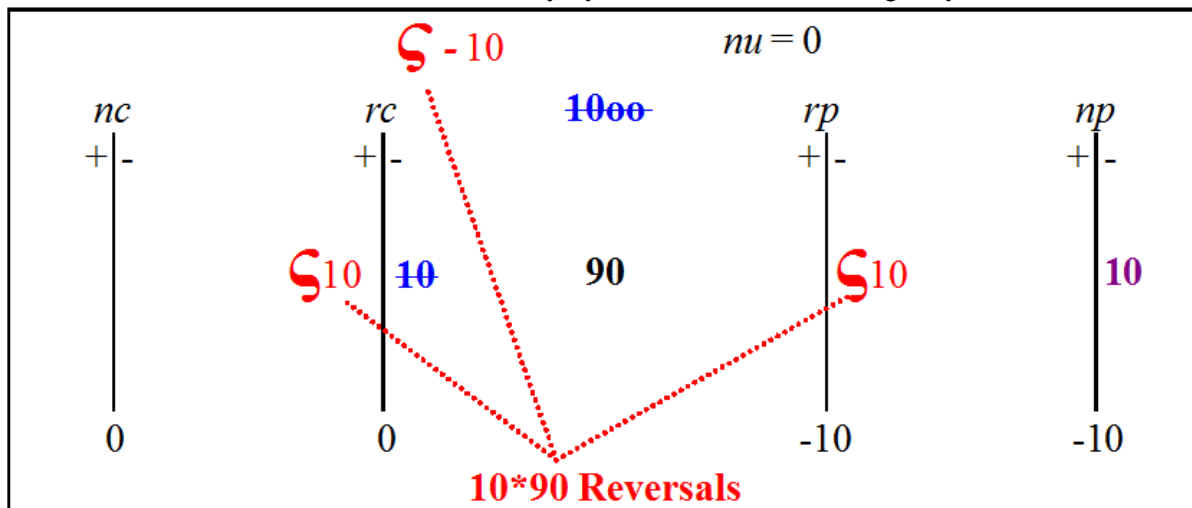
To be used properly, the SynTool () must be used in a group of three (imaginary trades) for much the same reason that in accounting there is an offsetting credit for every debit. If a bookkeeper posts a debit, a credit has to be posted

somewhere or the books are out of balance. If one part of the 3-piece SynTool is missing, the position will be out of balance and not synthetic to the raw position. This will result in a misperception of the position for risk assessment.

The SynTool acts as a template which can be overlaid on an existing position to reveal a less ambiguous (synthetic) position. To demonstrate the point about the Covered Write mentioned earlier, let's apply the SynTool to the position enquired about. The proposed position was to buy **1000** underlying stock at 96.00 and write (short or sell) **10** of the 90 calls at 9.00. By overlaying an **imaginary trade** (Exhibit 1-6), in this case a **90 reversal, 10 times**, that **liquidates the stock and calls and initiates a shorting of 10 of the 90 puts**, leaving **10 naked short puts**. We now would pay primary attention to the **Short Puts** and virtually ignore the **Long Underlying** and **Short Call**. It is easier to deal with one simple (synthetic) contract than the (actual) spread. Its price is absolute. There are no calculations. It is right in front of us all the time.

EXHIBIT 1 – 6

Embedded Conversion Set Aside by SynTool Dissection of Imaginary Reversal



There is only one way to use the SynTool in this particular example but in other positions with several strikes, it can be used at any strike, or used in reverse, yielding many synthetic versions of the trade. It is up to the trader to decide how the position is best viewed. One possibility is a way that shows a trading opportunity, for example the elements that are too expensive to be long or too cheap to be short given the remaining time and replacement candidates. This choice will vary among traders according to styles, current, market opinion, profit objectives, risk threshold, and experience. Irrespective of how the position is viewed, it is the same as its synthetic versions. The way the trader views his or her position depends on the time in the expiration cycle, the price level of the underlying, the implied volatilities, the implied volatility skew³ shape, and the trader's market objectives.

Example: Answer this question: What would the trader want the market to do if he or she had the following position Long 20 Oct 50 calls (at-the-money) and short 1000 underlying (+20 Oct 50c / -1000u)? In live appearances, a show of hands, results in differing opinions. When dissected all the opinions become one: the market needs to move either way fast.

First, the trader cards up the position, as shown in Exhibit 1-4, then dissects it, as shown in Exhibit 1-7, to help with the risk assessment.

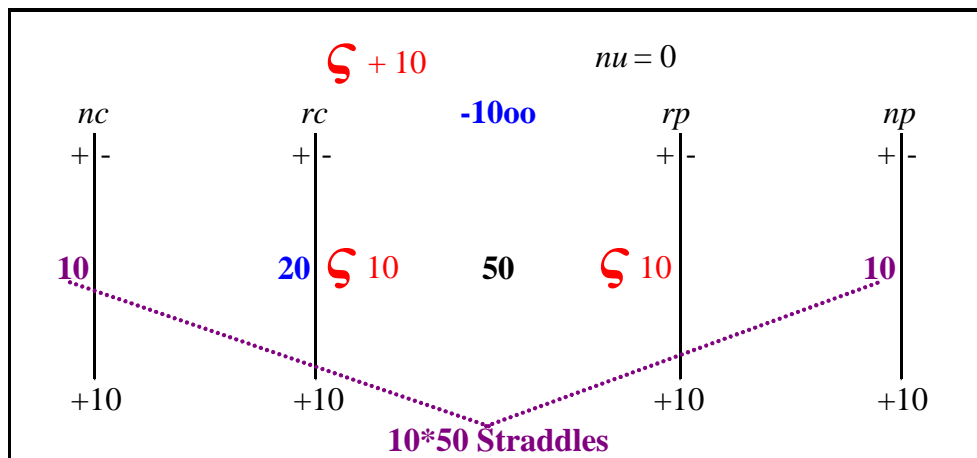
³ Implied Volatility Skew (see next page)

3 Implied Volatility Skew (from previous page)

The implied volatility skew shape, which is often called the skew or the smile, refers to the graph of implied volatility levels plotted against each strike for a given month. *Volatility skew*, or just "skew", arises when the implied volatilities of options in one month on one stock are not equal across the different strike prices. For example, there is skew in XYZ April options when the 80 strike has an implied volatility of 45%, the 90 strike has an implied volatility of 47%, and the 100 strike has an implied volatility of 50%. If the implied volatilities of options in one month on one stock ARE equal across the different strike prices, the skew is said to be "flat". You should be aware of volatility skew because it can dramatically change the risk of your position when the price of the stock begins to move.

EXHIBIT 1 – 7

+10 Synthetic Straddles



After Dissecting Out 10 Reversals by an Imaginary Trade of 10 Conversions

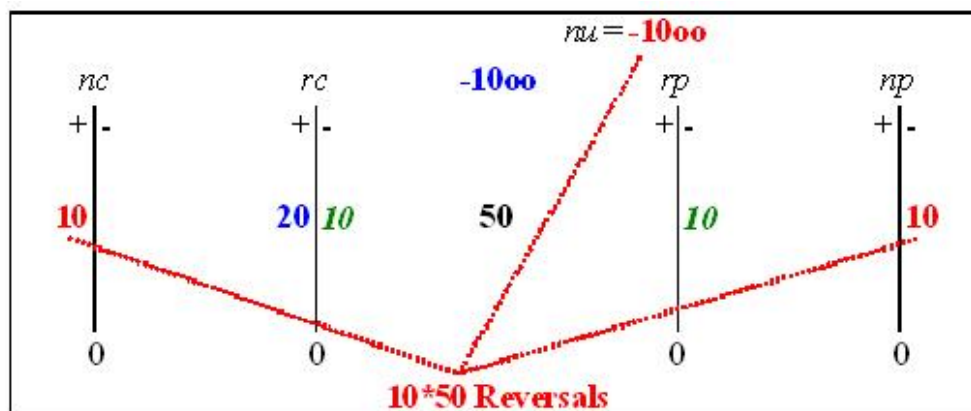
By overlaying the **SynTool template**, a locked strategy, in this case a **conversion**, as an imaginary trade, **10 long straddles** can be seen. If 10 actual conversions were traded subsequently, the resulting position would in fact, become 10 long straddles. If the conversion dissection is applied (the imaginary opposite or counter conversion trade) it removes the embedded reversal from the position. For risk control, the straddles become the first priority and the reversal becomes the second.

To prove that there is a reversal embedded in the position, notice the original raw position, long 20 Oct 50 calls and short 1000 underlying (+20 Oct 50c -1000u), but this time, say the trader **sells 10 straddles in an actual trade** (actual trades are italicized in Exhibit 1–8). The resulting position is 10 reversals at the 50 strike (**10*50 Reversals**)⁴.

It does not matter whether the SynTool (one set of three **S** symbols) is used first or for that matter the BoxTool (one set of four **□** symbols), as long as each is a complete set and the proper longs and shorts are adhered to.

EXHIBIT 1 – 8

10*50 Reversals as a Result of Selling 10 Actual Straddles



⁴ *

The asterisk is used to separate Quantity from Strike throughout the book.

Risk Doctor Exercise for Part 2

1. What is the best method to help avoid the pitfalls of options' lack of Transparency?
 - A. Having an options P&L analyzer
 - B. Having a broker to tell you (good luck!)
 - C. Trading by the seat of your pants with a hunch (will not last)
 - D. Position Dissection

Risk Doctor Exercise for Day 3 (Questions) (Answers on Page 2 & 3)

2. This drill is designed to help increase the speed at which you recognize the synthetic equivalent of positions involving options.

<u>Position = Synthetic Equivalent</u>	<u>Position = Synthetic Equivalent</u>
1) $+P =$ _____	13) $-C =$ _____
2) $-U + C =$ _____	14) $+C - P =$ _____
3) $+C =$ _____	15) $+U =$ _____
4) $-U - P =$ _____	16) $-C + U =$ _____
5) $-U =$ _____	17) $-C =$ _____
6) $-C + P =$ _____	18) $+P - C =$ _____
7) $+C - U =$ _____	19) $-U =$ _____
8) $+P + U =$ _____	20) $-P =$ _____
9) $+C =$ _____	21) $-P - U =$ _____
10) $+U - C =$ _____	22) $+U =$ _____
11) $-P =$ _____	23) $+P =$ _____
12) $-P + C =$ _____	24) $+U + P =$ _____

3. Converting Exercise Each of the following **Original** Positions have 2 Synthetic Equivalent Positions Syn 1 and Syn 2. Fill in the Blanks (Hint: Check your Net Calls and Puts)

	Calls	Und	Puts
Original	+17	(300)	
Syn 1:			
Syn 2:			
Syn 1:			
Original		+1300	+13
Syn 2:			
Syn 1:			
Syn 2:			
Original	+17		+17

	Calls	Und	Puts
Original	(14)	(1000)	
Syn 1:			
Syn 2:			
Syn 1:			
Original		(1800)	(33)
Syn 2:			
Syn 1:			
Syn 2:			
Original	+44		+33

	Calls	Und	Puts
Original	+22	+2000	
Syn 1:			
Syn 2:			
Syn 1:			
Original		+500	(5)
Syn 2:			
Syn 1:			
Syn 2:			
Original	+22		6