

A Hands-on Look at the “Bridgemate app”’s Double-Dummy Analyzer

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1 The analyzer at work

The Common Game of the afternoon of Thursday, July 7, 2016 included this seemingly innocuous Board 8:

Board 8	♠ A 2										
West Deals	♥ K Q 9 5 4										
None Vul	♦ A K 8										
	♣ A 6 4										
♠ K Q 7	<table style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; text-align: center; border-collapse: collapse;"> <tr><td></td><td>N</td><td></td></tr> <tr><td>W</td><td></td><td>E</td></tr> <tr><td></td><td>S</td><td></td></tr> </table>		N		W		E		S		♠ J 8 6 4 3
	N										
W		E									
	S										
♥ J 7 6 2		♥ 10 3									
♦ 5 2		♦ J 9 7 6 3									
♣ K 9 5 3		♣ Q									
20	♠ 10 9 5										
9 4	♥ A 8										
7	♦ Q 10 4										
	♣ J 10 8 7 2										
	NS 4♥; NS 3N; NS 5♣; NS 3♦; NS 1♠;										
	Par +420										

If North plays the very reasonable contract of 3NT on the lead of the ♠4, he goes down on the obvious line. He can hold up in spades only once, and it seems that his only play for the contract is to hope the hearts are 3-3, or that when West wins the unavoidable fourth round of hearts (to make the fifth heart his ninth trick), he has no spade left. But if the ♠4 was a true card, East’s trick-two ♠3 tells declarer

that the spades are 5-3 (declarer himself showed the ♠2, so East cannot have started with six spades); the heart play is doomed. And indeed -50 was normal for North-South on this contract and lead.

But there has to be more to it—look at the double dummy contracts. The hand record says that 3NT by North *makes* on a spade lead!

If you want to find out how to make 3NT, you don't need to ask an expert, and you don't need to go through a tree's worth of paper trying out one thing and another. If you played that board, your smartphone, *if you have installed the "Bridgemate app" on it and your club supports it, as we do*, will let you replay that hand—and every hand in the session—over and over and tell you exactly what the double-dummy outcome for each possible card by each hand at each turn will be. And the route to the make of 3NT will reveal itself.

(repeated for convenience)

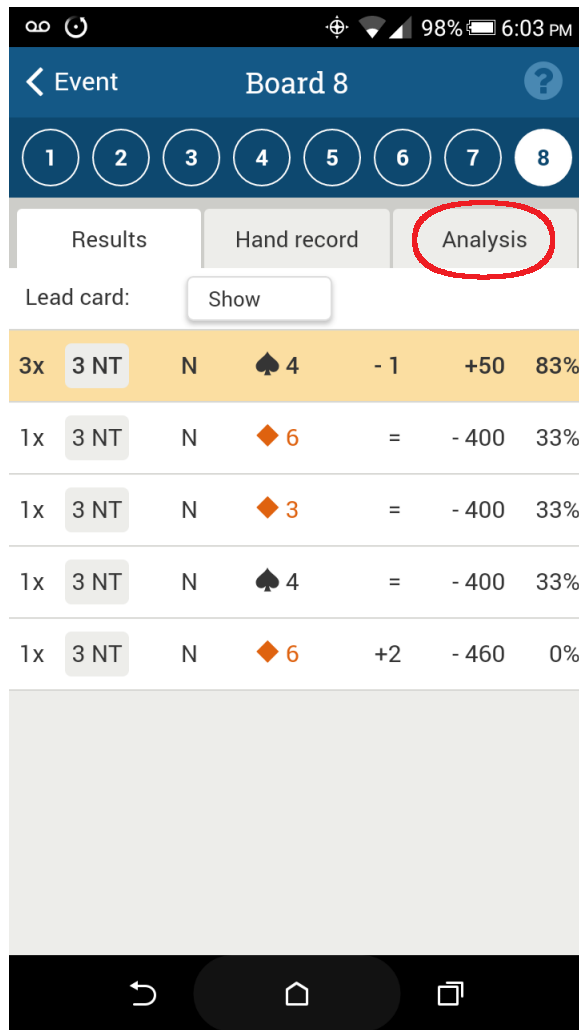
Board 8
 West Deals
 None Vul

♠ A 2		
♥ K Q 9 5 4		
♦ A K 8		
♣ A 6 4		
♠ K Q 7	♠ J 8 6 4 3	
♥ J 7 6 2	♥ 10 3	
♦ 5 2	♦ J 9 7 6 3	
♣ K 9 5 3	♣ Q	
	♠ 10 9 5	
	♥ A 8	
	♦ Q 10 4	
	♣ J 10 8 7 2	

20	
9 4	
7	

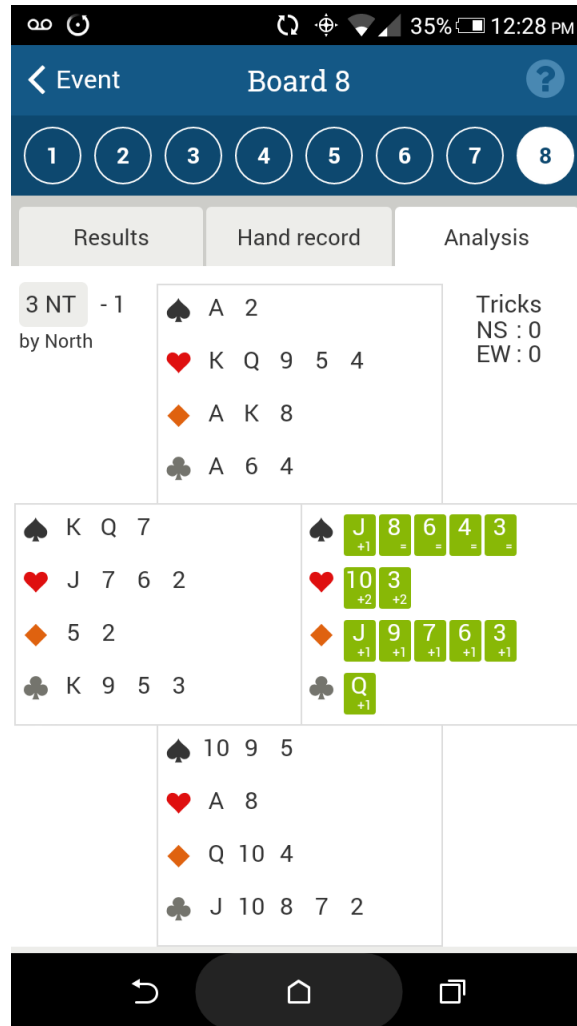
NS 4♥; NS 3N; NS 5♣; NS 3♦; NS 1♠;
 Par +420

The club Web site has a [link](#) in its right-edge menu to download the Bridgemate app for any Android or iOS smartphone, and the vanilla functions are straightforward. Here you see a smartphone with the Bridgemate app running, and with the section's results on Board 8 of the July 7 session displayed:



We've circled the object of our desires in red: the "Analysis" button.

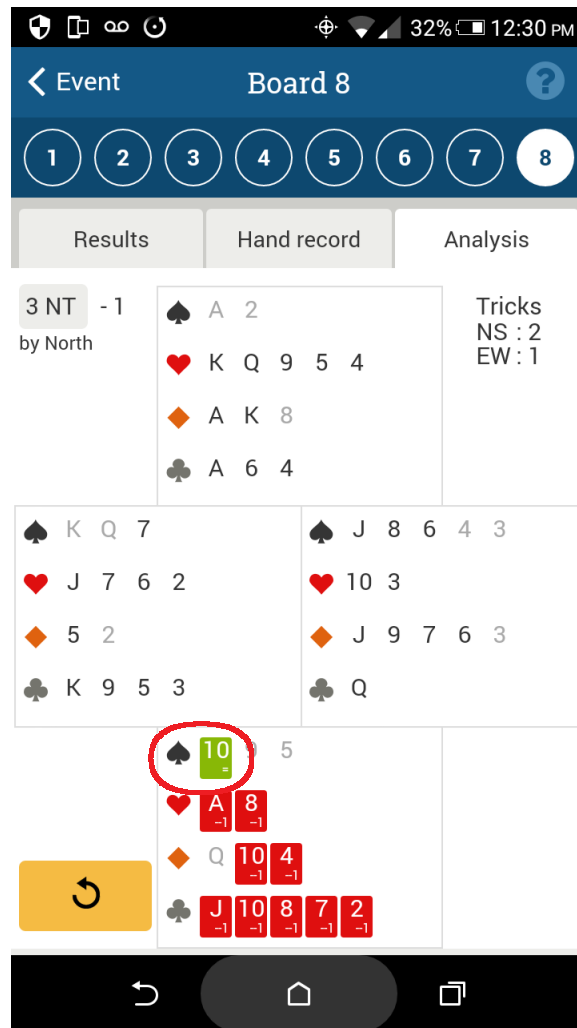
Tapping “Analysis” will produce this screen:



The key to what the analyzer has worked out is in those colored boxes (all green here, meaning nothing is beating the contract); making with no overtricks is shown as “=”; overtricks are “+” and green; undertricks are “-” and red. The four spade spot cards have the same indication of “=”; among the spades, only the jack is worse for the defense¹ and is so marked, with “+1”. Now, let’s make the obvious plays (you play a card in the app by tapping on it) for the first two rounds. Dealer wins the spade ace, and now for reasons known only to himself (but extremely convenient for this exercise) plays a diamond to dummy’s queen.

¹because it would block the suit

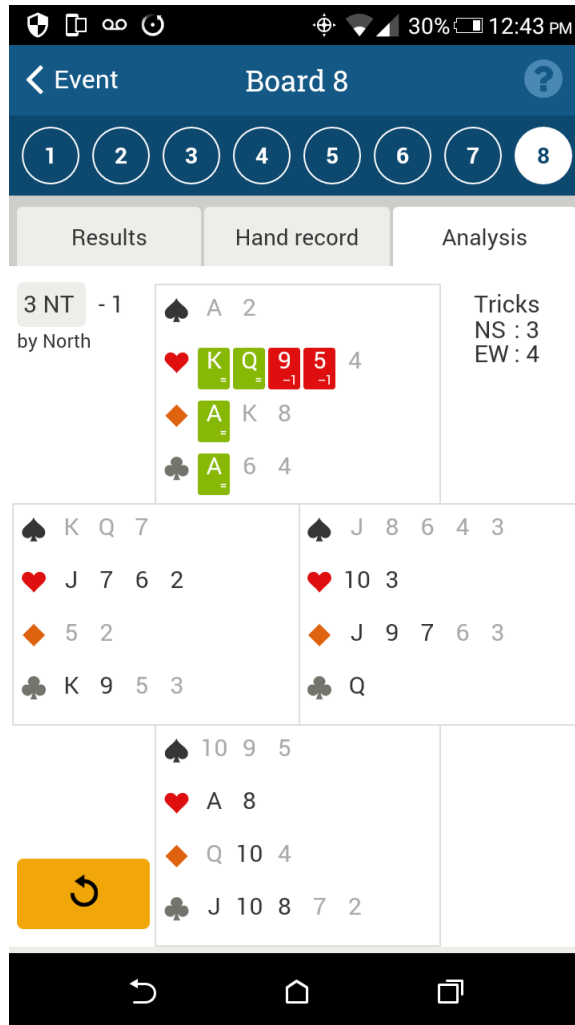
The result is a surprise:



Look at what we've circled in red. *The only card in green—that is, the only card declarer can call from dummy to make the hand—is the ♠10.*

The reason this works is that if East cashes out his spades, he squeezes his partner, who had the job of protecting both the heart and the club suits; East can't protect either one. This catastrophe is known as a "Suicide Squeeze" (bridge being a

partnership game, East has wrecked himself as well as his partner.) Here is the position after the spade cashout with West about to come under pressure:



As long as declarer *cash*s the ♣A while he still has the ♥A (“Vienna Coup”, an unblocking maneuver), the squeeze inflicted by cashing his diamonds will yield the ninth trick in either hearts or clubs. Cashing the hearts without first cashing the ♣A would be fatal if the hearts did not split, because the ♣J would be unreachable even if it became good.

There is no salvation for the defenders. East must leave his last spade uncashed and play something else that declarer will win, but now, having lost only *three* tricks and with West long ago out of spades, declarer sets up the heart thirteener in peace for his ninth trick.

