How to play the odds as declarer

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In bridge, you make lots of decisions. You can't always guarantee success—but if you play the odds, in the long run you expect good results.

Example: You are declaring 3NT. LHO leads the ♠Q and you win the ♠A.

Dummy:	♠432	♥KQ7	♦832	♣AJ109
Declarer:	♠AK	♥A43	♦AQ654	♣543

You have 7 top tricks and need 2 more, from diamonds or clubs. If you lose the lead, they will knock out your ♠K, so if you lose the lead again, they may have enough tricks to set you. Which suit should you attack?

The answer depends on how the suits are likely to split and where the honors are likely to be. To figure that out, you can use:

1. *Basic probabilities (odds)*, which assume you have no information about the opponents' distribution or point count
2. *Additional information* gained from the bidding and play

Probability is a tool for dealing with uncertainty. The probability of an event is a number between 0 and 1 (or 0% and 100%). In bridge, often you don't need to think specifically about probabilities. But particularly in declarer play, sometimes it is useful to estimate them.

Finesses

A basic finesse is a play that has a 50% chance of success—if you have no information that makes either player more likely to have a given card.

543 – AQ2. Lead low toward the Q in hopes that second hand has the K.

QJ10 – A43. Lead the Q (or J or 10): you win 3 tricks 50% of the time.

Q32 – A76. To win 2 tricks, lead toward the Q. Also a 50% chance. (If you lead the Q, your chances of winning 2 tricks are approximately zero.)

If you have *two* finesses, the chances that both will succeed (or fail) is 25%.

To compute the chances of two events *both* happening, *multiply* their probabilities. So winning 2 finesses is 1/2 x 1/2 = 1/4 = 25%.

432 - AQ10. Lead a low card and finesse the 10 if the next player plays low. Next time finesse the Q. You win 3 tricks if both K and J are on side (25%). You will win only 1 trick if both K and J are off side (25%). The rest of the time the honors are split, so you get 1 trick (50%). The same idea applies any time there are two different finesses, in the same suit or different suits.

432 – AJ10. Also two finesses. There is no way to win 3 tricks, but you win 2 tricks as long as both K and Q are *not* off side; therefore 75% of the time.

Q42 - A103. Lead toward the Q. If it loses to the K, next lead toward 10. This play has a 75% chance to win 2 tricks. Any other play is only 50%.

532 – AQJ76. How often will you win 5 tricks in this suit? 4 tricks? To answer this, you need to know the probability of suit distributions.

The distribution table

You have	They have	Split	Probability (%)
11	2	1-1	52
		2-0	48
10	3	2-1	78
		3-0	22
9	4	3-1	50
		2-2	40
		4-0	10
8	5	3-2	68
		4-1	28
		5-0	4
7	6	4-2	48
		3-3	36
		5-1	15
6	7	4-3	62
		5-2	31
		6-1	7

The more you can get a feel for these numbers, the better your declarer play will be. Some hints: With an *odd* number missing, they are favored to split as evenly as possible (2-1, 3-2, 4-3). With an *even* number missing, they are *not* favored to split as evenly as possible, except for 1-1. 3-1 is more common than 2-2, and 4-2 is more common than 3-3.

"Eight ever, nine never?"

You have probably heard this rule, which refers to whether you should finesse for a Queen with a given number of cards. We can use the table to understand it. We can actually extend this rule and improve on it!

Let's start with an 11-card suit. **86432 – AQJ1098**, missing Kx. From the table, a 1-1 split is 52%, so cashing the Ace is *slightly better* than finessing.

98765 – AQJ32. With 10 cards (or less), finessing is clearly best. Cashing the A win only if there was a singleton K (26%).

K876 – AJ543. Play the K first, hoping to find a stiff Q. If both follow low, do you finesse or play for the drop? This is "nine never", which means: never finesse—but that's an exaggeration. It's *slightly* better to play the A. This is similar to 11 cards missing the K: the plays are very close.

A53– KJ762. This is "eight ever". After cashing the A, finessing is much better than playing for the drop.

KJ109 - A876. You can finesse either way with 50% chances. But there are often clues to make it more likely that the Q is in one hand or the other.

AK107 - Q52. Play A, then Q. If the J doesn't drop, there is a choice of finessing the 10 or playing the Q to drop the J. This is analogous to the "nine never" situation: it's *slightly* better to play for the drop.

AKQ10 – 52 Finessing is much better than trying to drop the J. This is "six ever" (analogous to "eight ever").

Summary:

- With 10 cards missing the K, 8 cards missing the Q and 6 cards missing the J, finessing is *clearly* better.
- With 11 cards missing the K, 9 cards missing the Q and 7 cards missing the J, playing for the drop is *marginally* better.

Therefore, my updated rule is: ***"EVEN ever, ODD optional"***

> "Optional" means: there's a *small* edge to playing for the drop, but if you have other information, finessing can often be right. (See "Beyond the Basic Odds")

Using the distribution table, you can figure your trick potential in any suit. This allows you to decide which of two or more suits is better. Back to the play problem from the first page: In 3NT, to get 2 extra tricks, should you attack clubs or diamonds?

Dummy:	♠432	♥KQ7	♦832	♣AJ109
Declarer:	♠AK	♥A43	♦AQ654	♣543

In clubs, you can finesse twice, which gains two tricks if West has at least 1 honor (75% of the time). In diamonds, you can finesse the Q, potentially getting *three* extra tricks. But for that to happen, East must have the K *and* the suit must split 3-2. (If the finesse wins but the suit breaks 4-1, you may not have time to set up another diamond, since they will run spades.)

A 3-2 split is 68%, and the finesse wins only half the time, so the overall probability is 1/2 x 68% = 34%—compared to 75% for playing clubs. So clubs are *much* better.

If the diamonds were AQJxx instead, then you need a finesse *or* a 3-2 split. The exact calculation is trickier—but it must be *better* than either individually. (The answer is 84%).

Another example: you must develop 4 tricks and you can afford to lose the lead once. Which combination is better?

A:	KQJ10x	vs.	B:	KJ109x
	xx			xxxx

Even though B has 9 cards to A's 7, A is better, because it gives 4 tricks whenever the suit breaks 4-2 *or* 3-3% plus when LHO has a stiff A: which works out to 85%. B works only when the Q is with LHO (50%).

Beyond the basic odds

♠K103 - ♠AJ2. You have a 2-way finesse for the ♠Q. On average, your chances are 50% either way. What information can affect your chances?

1. The hand with more cards in a suit is more likely to have any honor in that suit

Suppose LHO had overcalled 1♠. If LHO has 5 spades and RHO has 2, the odds of the Q being with LHO are 5 to 2, or a 5/7 probability, or about 71%. (In practice, they will be even higher because LHO might have 6 cards and would be less likely to bid a 5-card suit without the Q.)

2. The hand with more HCP is more likely to have any honor

In the same example, suppose RHO opened 1NT (15-17 HCP) and you got to a partscore with 20 HCP between declarer and dummy. LHO is marked with 3-5 HCP, so RHO has about 4 times as many points as LHO. The odds of finding any honor (including the ♠Q) with RHO are 4 to 1 (80%).

3. The hand with more cards in the *other* suits is less likely to have any card in *this* suit

♠K1032 ♥A87 ♦K54 ♣QJ10
♠AJ954 ♥K43 ♦A3 ♣542

You are in 4♠. You can play to drop the ♠Q or finesse either opponent for it. Suppose LHO opened the bidding with 3♦. LHO probably has 7 diamonds and RHO 1. This means LHO has 6 *unknown cards* and RHO has 12. So the chances of finding any missing card with RHO are about 12 to 6, or 2 to 1, or 67%. In essence, there is less room in LHO's hand for any other card.

If RHO instead had opened 3♦, the odds swing the other way. It is correct to finesse against the partner of the preempter.

Play considerations

Sometimes you need to *ignore* the odds in a given suit to improve your chances for a hand.

Dummy: ♠72 ♥952 ♦AK4 ♣A10863
Declarer: ♠KJ6 ♥AK8 ♦653 ♣KJ97

West leads ♠4 vs 3NT and East plays ♠Q. You win the K and count 9 tricks, even if you lose one in clubs. The percentage play in clubs is to play the A and K ("nine never"). But if East has ♣Qxx, a spade return could defeat you if West has 5 spades. It's OK to lose a club to West, because your ♠J is protected. So play the ♣A and finesse the ♣J, guaranteeing your contract.

Dummy: ♠732 ♥KJ95 ♦A54 ♣A98
Declarer: ♠KQ6 ♥A876 ♦K432 ♣K3

East opened 1♠ and you got to 4♥. West leads ♠5 to East's A and East returns a spade. Fortunately West follows with the ♠4. You cash ♥A and play ♥6 and West follows. The percentage play in hearts is "eight ever" (finessing) but here you have *two* reasons to play the ♥K:

1. On the bidding, East is favored to have the ♥Q.
2. You know that West has a doubleton spade. Losing the finesse to a doubleton ♥Q is fatal because East will return a spade for his partner to ruff, so you will lose *two* trump tricks (as well as a spade and diamond) and go down. You don't mind losing *one* trump trick to the Q.

Restricted choice

This type of combination often confuses people, but it comes up frequently.

Kxxx - A10xxx. You hope for a 2-2 split. But if you play the K and LHO drops the Q, you now have the option to finesse, playing RHO for Jxx. You might think the chances about equal, since there's only one card missing and it could be in either hand. Yet the finesse is clearly better! Why?

Look at it from the defender's point of view. Holding the stiff Q or stiff J, you must to play it. But with QJ doubleton, you can play either one; neither is better. So when you are declarer and see the Q, it's more likely the defender's play was was forced (a singleton) rather than a free choice from QJ.

Exercise hands

1.

	♠743 ♥42 ♦AK532 ♣642	
♠109 ♥QJ1065 ♦Q10 ♣KJ98		♠QJ865 ♥983 ♦J64 ♣103
	♠AK2 ♥AK7 ♦987 ♣AQ75	

West leads ♥Q against your 3NT contract. You have 7 top tricks. Your best play is to hope for a 3-2 diamond split (68%). Finessing in clubs is only 50%, and even if it wins you need to find a 3-3 split too.

Be careful to *duck* the first (or second) round of diamonds so that you maintain an entry to run the long diamonds.

2.

	♠743 ♥A42 ♦AQ1032 ♣64	
♠KQ1092 ♥Q65 ♦KJ5 ♣98		♠865 ♥10873 ♦64 ♣KJ103
	♠AJ ♥KJ9 ♦987 ♣AQ752	

West leads ♠K against your 3NT contract. You have 5 top tricks so you need 4 more, and you can't afford to lose the lead. There is no point in finessing in hearts or clubs, because those suits won't give you enough tricks. You have to hope for all 5 tricks in diamonds, and your best play is to finesse the *10*, hoping for KJ on your left. You have about a 25% chance of success, but it's the best you can do.

3.

	♠K432 ♥AQJ72 ♦832 ♣6	
♠5 ♥654 ♦A964 ♣KQJ108		♠Q107 ♥83 ♦QJ10 ♣97543
	♠AJ984 ♥K109 ♦K75 ♣A2	

West leads ♣K against your 4♠ contract. You win and lead a spade to the K. Should you finesse or play to drop the Q? The drop is the percentage play for the suit itself, but not for the hand. You need to keep East off lead so he can't lead a diamond through. West can't attack diamonds without setting up your K. If the trump finesse loses, your contract is safe because you can pitch diamonds on hearts once trumps are drawn.