# BLACKJACK

lackjack is one of the world's most popular card games. It is also the favorite game of casino patrons around the globe. At any given time, a crowded casino may have thirty or more tables with seven card players at each. Blackjack is second only to Bank Craps in amounts of money won and lost.

The history of the game, known commonly as *Twenty-one*, can be traced back to Italian, Spanish, or French card games of similar nature. History books from the eleventh century make references to such card games where players attempted to reach certain totals.

By its French name, *Vingt-et-un* (21 in English), it was the parlor game of fashion in the eighteenth century. Its popularity spread throughout the world, and the French name became corrupted into various forms: in England, *Van John*, and in England and Australia, *Pontoon*.

Blackjack gained enormous popularity in the first half of this century, thanks in part to the U.S. Army. Along with poker, this was the American soldier's favorite card game. In just the last few decades, the rise in popularity has changed it into a big money game, where betting limits have increased from \$25 to \$1000—and higher in many casinos.

## THE SYSTEM

Blackjack players have been bombarded with information, books, and pamphlets claiming that the game may be beaten with a "system," making the player a consistent winner if he follows certain rules unwaveringly. Such claims are usually made by non-gambling mathematicians and are entirely misleading.

Blackjack is an exciting game because, from one deal to the next, the odds vary perceptibly; the player who can maintain an estimate of the cards that have already been dealt (known as card counting) takes full advantage of this fact. The recommendations in the section on strategy (page 519) are formulated to reduce the House's 5.8% advantage against the blackjack player by a considerable amount.

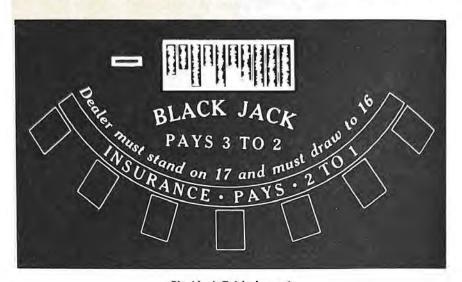
## PLAYERS

From one to six or seven players, depending on the size of the table.

## PERSONNEL

The dealer, who also banks the casino's chips. He is the permanent dealer throughout the game.

A casino official who supervises the game. It is his responsibility to see that the dealer behaves fairly and that he pays off and collects wagers correctly. He also has the final word on any arguments between the dealer and a player. He is known as the pit boss, the supervisor, or the inspector.



Blackjack Table Layout

## EQUIPMENT

## CARDS

From one to eight standard decks, each containing 52 cards.

## THE SHOE

A box made of wood or plastic, from which the cards may easily be removed one at a time by the dealer (if more than two decks are used).

## A HORSESHOE-SHAPED TABLE

Seating six or seven players, the table is covered in green baize cloth, and has printed upon it boxes in front of each player's chair plus such directives as "The dealer must stand on all 17's."

#### ARACK

Containing betting chips or currency.

## TWO JOKER OR INDICATOR CARDS

Used as part of the shuffle (to be explained later).

The suits have no value in Blackjack. The cards 2 through 9 are valued at the number on the face. Tens and all picture cards (jacks, queens and kings) are equally valued at 10.

The ace may be counted as either 1 or 11 by the player. The dealer's freedom to count the ace as either 1 or 11 is limited by the rules of the casino; these vary from casino to casino.

It has become nearly standard practice in legitimate casinos to use multiple decks when dealing blackjack. Between two and eight decks are employed. Half of the cards have blue backs and half have red backs. The different colors help to protect players from being dealt a card other than the top one by the dealer (known as dealing "seconds") when a shoe is not being used.

## THE SHUFFLE

The dealer shuffles the cards. When the game is played with multiple decks, the dealer splits the cards into two piles; he then takes a third of each deck and shuffles them together. The process is repeated twice more. The dealer then cuts the deck in several places. He hands one of the players a blank or joker. The player inserts the indicator card into the deck and the dealer cuts the deck at that point. The indicator card becomes the last card in the deck. The dealer inserts another indicator card fifty cards or so from the bottom. When this indicator card appears during play, that deal is finished, and then the deck is reshuffled, following the procedure just explained.

The second indicator card is inserted to reduce the value of card counting. A skilled card player will attempt to make note of the cards that have been dealt, so he can gain an idea of the cards that remain. The card counter tries to keep tabs on how "rich" the deck is in certain cards, most notably the cards that count 10: tens, jacks, queens, and kings. This information is most useful toward the end of the shoe. By ending play and reshuffling the deck before the last section of the deck is dealt, the card counter is robbed of such information.

In casinos where blackjack is dealt from a single deck, the official in charge may order the dealer to reshuffle the deck at any time during play. Again, this is a tool the casino uses against card counters. If, with few cards remaining in the deck, a player greatly increases his wager, the pit boss may order the dealer to reshuffle the deck.

## BETTING

Before any card is dealt, each player must place his wager in the space in front of him. Each player is betting against the dealer and not against

the other players. The dealer then checks to see that all wagers fall within the minimum and maximum amounts allowed. In most of the larger American casinos the minimum bet is usually \$5; however, on weekends or in peak periods the minimum may be raised to \$15. The maximum wager can go as high as \$1,000 to \$3,000. A bettor may ask the permission of the pit boss to place a bet higher than the limit. The pit boss can either grant or deny that request. A player at times will neglect to make a bet, and thus will be dealt out for that hand.

Some casinos permit players to hold more than one hand at a time. If a player sits at a table with three players and the other four player spaces are empty, he may place wagers in more than one space. The dealer will then deal him additional hands. Each hand must be played to completion beginning on the player's right before he may move left to play the next hand.

## DEALING

After all bets have been placed for the first deal with a new shoe, the dealer removes the top card without showing it to anyone and places it in a box reserved for discards. At the end of each round all the cards used in each hand also go in the discard pile. Removing the top card is known as burning the card. The top card is burnt to prevent the first player from making a large bet on the chance that he'd seen it when the deck was cut.

The dealer gives one card face up to the player on his extreme left (whose place at the table is known as *first base*), and deals each player one card face up, moving in a clockwise direction. He gives one card to himself, face up. He repeats the deal, giving each player, starting on his left, a second card face up, and one more to himself, face down. Since the cards are dealt face up to the players, they have no need to touch them.

### OBJECT OF THE GAME

Each player wins by having a higher total of points than the dealer, equaling or coming as close to 21 as possible without exceeding it. Any player holding less than or equal to 21 when the dealer goes over 21 also wins. If a player goes over 21 he has *busted* and so loses his bet.

#### THE PLAY

If the dealer's face-up card is an ace or a card valued at 10, he must look at his other card (his face-down card is known as the *hole card*). In some areas, the dealer must look at his hole card immediately after the deal of the first card. In other areas the dealer may wait until it is his turn to draw before looking at the hole card.

In most casinos, when the dealer draws an ace face up, the players are invited to *insure* their bets (more on this later). If he has a natural 21 or blackjack (an ace and a 10-count card), he turns the hole card over and announces: "Twenty-one." Play ceases and the bets are collected. If a player also has blackjack, his wager is considered a standoff and remains in the player's possession. A blackjack beats all other hands except another blackjack.

When a player has a natural 21 and the dealer does not, he wins one and a half times his bet and is paid immediately. A player who bets \$10 and receives blackjack wins \$15 above his original wager, for a total of \$25. Conversely, when the dealer has blackjack he is not paid off at 3–2 odds, but collects the original wager made by the losing player.

If the dealer does not have blackjack and he has paid off any player with blackjack, that round continues. Starting on the dealer's extreme left, each player either stands (or sticks) on the count he has received or asks to be hit for an additional card (or cards) in an effort to improve his score. Casinos require players to ask for cards non-vocally. That is done either with a scraping motion of the fingers or as when motioning someone to come over to you. Using a hand motion negates possible confusion, amidst the ruckus of a crowded casino, as to whether or not the player has called for a card.

Each player must draw until satisfied with the final count before the dealer can move to the next player. When a player stands, he indicates it by passing his hand horizontally over his cards.

If a player busts, meaning going over 21 in the count, the dealer immediately removes his cards, placing them on the discard pile, and collects his wager.

## THE DEALER'S TURN

When all of the players' hands are completed, the dealer flips over his hole card and either takes cards or stands on his hand according to fixed rules:

If his hand is a 17, 18, 19, or 20, he must stay.

If his hand is less than 17 he must draw a card—and continue to draw until his hand reaches 17 or more (the rule on whether or not the dealer hits on a so-called soft 17 varies, and will be explained in a moment).

The dealer has no freedom within the rules on drawing and standing. These rules are standard for each casino. The player has the advantage of knowing ahead of time which route the dealer is going to take.

## HARD AND SOFT HANDS

Players can count the ace as either 1 or 11. For this reason, a hand of 5-A (a 5 and an ace) may be counted either as a soft 16 or a hard 6.

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A player can draw on a soft 16, hoping for a 5-count or less. If he apparently busts, he continues to draw, now counting the ace at a value of 1.

In casinos where the dealer has to hit on soft 17s, it works against the player.

## SETTLEMENT

When the dealer stands, he pays off all winning players—those with a higher total than his own. Bets are paid at 1–1 odds. If a player has the same total as the dealer, no money changes hands. If a player has a lower total than the dealer, he loses his wager.

If the dealer has bust, he pays off all players who have not bust.

After chips have been collected and paid out, the dealer puts all the cards into the discard pile and starts the next hand.

## SPLITTING PAIRS

When a player receives two identical cards (perhaps two 3s or two queens—the suits of the cards are ignored), they are considered a pair. The player then has the option to divide the pair and treat each as if it were the first card dealt in a hand. Splitting pairs requires that an additional wager of the same amount as the original wager be placed on the new hand; and he indicates his desire to split the pair by placing a second wager beside his first.

The player must draw or stand on the card to his right and complete it before drawing on the second card. If the third card dealt to him is identical to the others, he may again split this hand, into a third one, and a third wager is required. However, aces cannot be split this way in most casinos; and if they may be split, only one card can be drawn to each ace.

If the hand, once split, yields a count of 21 with two cards, it's considered a normal 21, not blackjack. If the hand is a winner, it pays off at 1-1 and not 3-2 odds.

## DOUBLING DOWN

Once a player is dealt his two cards, he may double down. The player places a wager equal to the original bet in the box before him, and is then allowed to draw one card only. This last card is dealt face up.

The best opening hand for a player to take advantage of the double-down rule is a two-card count of 11, as it is impossible to bust and the odds are greatest that a 10-value card will be drawn, yielding 21 (there are sixteen 10-count cards in each deck, more than any other).

Most casinos allow the double down on any two-card total; some, however, restrict this bet only to 9-, 10-, and 11-count totals.

#### CASINO GAMBLING GAMES

#### INSURANCE

When the dealer's face-up card is an ace, the player has the option to place an insurance bet. This is done before the dealer looks at his hole card. A bet half the amount of the player's opening wager is placed on the insurance line.

Insurance bets pay off at 2-1 odds, thus "insuring" against the dealer's blackjack. If the dealer does not have a 10-count card in the hole, the player loses his insurance bet but keeps his original wager until final settlement of the hand.

In Atlantic City, where the dealer can't look at his hole card until all of the players have acted, insurance bets are paid off or collected at the end of the round.

#### SURRENDER

This option is offered in some casinos. It allows a player to drop out of a hand after seeing his first two cards. He forfeits half of his original bet and the dealer removes his cards from the table. This action has to be taken before the player takes any cards other than the original hand.

The surrender bet is in effect in Atlantic City casinos and a few casinos in Las Vegas. It is a terrible bet for the player, and gives the House more than a 20% advantage in most cases.

# Strategy

In blackjack, the House has a considerable mathematical advantage. A player can combat the House percentage by utilizing certain tools and card-counting skills (to gain knowledge of the contents of the deck). He must exploit his ability to deviate from the dealer's rules of hitting and standing; the competitive blackjack player should also double down and split pairs when the odds dictate. Lastly, he must bet wisely.

The House gains its advantage through the order in which the hand is played. In every case, the player must draw or stand before the dealer can complete the action on his own hand. If the player busts, that hand is over. The dealer collects his cards and wager. The dealer wins automatically, without continuing to see whether he, too, would have busted. The rules in blackjack about all ties ending in a standoff do not hold in the case of the player's bust. The dealer's percentage advantage works out to be 8.33%.

The player's 3-2 payoff on blackjack gives him an advantage of 2.4% over the House. By subtracting the player's advantage from the House advantage, the dealer ends up with a net advantage of 5.8%.

## HITTING STRATEGY ON HARD HANDS

It is a given that on any hand of 11 or below, the player will hit. On any hand of 17 or above, he will stand. The dealer must hit on all counts of 16 or below, and stand on all counts of 17 and above.

The situation, then, that the player must master is whether to stand or hit on counts of 12, 13, 14, 15, and 16. These hands are known as stiff hands.

In general, the player will draw to a stiff hand when the dealer's faceup card is high, and stand on a stiff hand when the dealer's face-up card is low.

The following recommendations were calculated using a single deck of 52 cards. It was assumed that the hands appeared exactly as probability predicted from a full deck, and that the dealer and one player only were involved. It was found that this is statistically reliable; there is no need to use eight decks and several players. However, if you own a computer, you might like to write a program to confirm (or refute!) these rules.

## RULES FOR HITTING AND STANDING

When the player holds a count of 12 and the dealer's face-up card is a **2**, **3**, **4**, or **7** or higher, he should ask to be *hit*. When the dealer's face-up card is a **5** or **6**, he should stand.

As there are more 10-count cards in the deck than any other, it is always most likely that the dealer will have a hole card valued at 10. If he does, a face-up card of **5** or **6** puts him in the dangerous position of having to hit on 15 or 16. As the dealer has no choice but to hit below 17, he is likely to hit and go bust. That is what the player hopes for when employing this strategy. The dealer's chance of busting outweigh the player's chance of hitting to a final count of between 17 and 21.

Whether the player holds a 13, 14, or 15, he should always stand when the dealer shows a **2** through **6**. If the dealer's face-up card is higher than **6**, the player should always hit.

When the dealer's face-up card is a **7**, **8**, or **9**, the player holding a 16 should ask to be hit; otherwise he should always stand.

It's difficult sometimes for the player holding a count of 16 to hit, only to see the dealer bust right after. In the long run though, the player holding a 16 must take the risk and hit when the dealer holds a 7, 8, or 9.

The following chart simplifies the many rules for standing and hitting on hard totals:

Table 1 Strategy for Hitting and Standing on Hard Hands

## **Dealer's First Card**

		2	3	4	5	6	7	8	9	10	A		
	12												
P _	13												
T	14												
y t e a r, l	15												
5	16												
	17												
		DC	OUBL	E DO	WN		DON'T DOUBLE DOWN						

## SOFT HAND HITTING STRATEGY

A soft hand is any one in which the ace is counted as 11 instead of 1. A hand of **A-3** can be totaled as a soft 14 or a hard 4; **A-7** is totaled as a soft 18 or a hard 8.

An opening hand with an ace can never total more than 11 or 21, so it's impossible to bust taking one card on a soft total. The advantage of a soft hand is that the smart player has two chances to better his score: If he hits on, for example, a soft 17 and receives a 4, he stands pat with a soft 21. If he receives a 7, he now counts the hand not as 24 but as a hard 14 and hits or stands according to the rules of hard hand strategy. It is better, at this point, to be stuck with hard 14, having tried to improve the soft 17, than never to have risked it by standing on the soft 17 and hoping the dealer ties or busts. In the long run, a 16 or 17 is not a winning hand, and a tie in blackjack is not a desirable outcome. The longer a player sits and waits for his numbers or cards to appear, the stronger are the odds against him. Hands that end in a tie just drag out the process.

A player should never stand on a soft 17 or less. If the player holds a soft 18 and the dealer's face-up card is a **7** or below, it's best to stand; when it's an **8** or higher, hit on the soft 18. It's better to hit the soft

hand, or bust and try again with a hard total, than to stand pat and hope the dealer busts or ties.

The player should always stand on a soft 19 or higher.

Table 2
Strategy for Hitting and Standing on Soft Hands

Dealer's First Card

17					
18					
19					

## SPLITTING PAIRS

Any two cards of the same value are considered a pair. When splitting a pair into two new hands, an additional wager equal in amount to the first must be placed beside the new split hand. Although all pairs can be split, it is not in a player's best interests to do so randomly. As will be seen, not all pairs are equal.

For example, a player is dealt a pair of **5**s, which total 10. A **5** is harder to make into a good hand than one totaling ten. The player who splits a pair of **5**s is making more trouble for himself than he who keeps the hand as a pat 10.

The rest of the rules are as follows:

Split 2s and 3s when the dealer's face-up card is 7 or lower;

Split 7s when the dealer holds a 5, 6, or 7;

Split 8s unless the dealer holds a 9, a 10-count, or an ace;

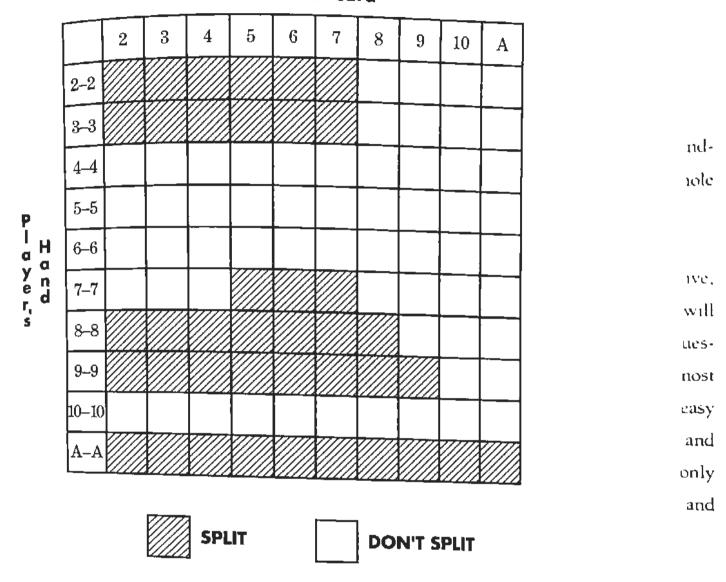
Split 9s unless the dealer's face-up card is 10-count or an ace;

Split aces always, even though most casinos only allow one card to be drawn to a split ace.

Do not split 4s, 5s, 6s, or 10-counts.

Aces and 8s are both recommended as pairs to be split, but for different reasons. The best possible hand to start with is 11, so two chances of starting with 11 are far better than one chance of hitting on a count of 2 or 12.

Table 3 Strategy for Pair Splitting Dealer's First Card



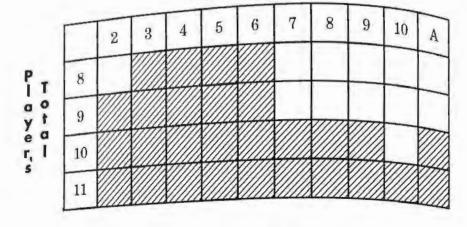
Split 8s because together they make sixteen, a terrible hand. In this case, splitting the hand yields the lesser of two evils. Rather than hit on 16, it's wiser to start over and hit on two hands of 8.

# DOUBLING DOWN STRATEGY

The player has the option, in almost all casinos, to double his wager after the opening deal (sometimes he is restricted to doubling down only on the 10. or 11-count). The player is then allowed one card only to complete the hand, Many gamblers turn this asset into a liability by ignoring the basic strategy for his hand simply strategy for this type of play. A player might double down his hand simply because he cause h because he sees another player doing so, or because the dealer asks. Neither of these methods is recommended.

Table 4a
Strategy for Doubling Down on Hard Hands

# Dealer's First Card



DOUBLE DOWN DON'T DOUBLE DOWN

Table 4b Strategy for Doubling Down on Soft Hands

## Dealer's First Card

		2	3	4	5	6	7	8	9	10	A
	13										
	14										
T	15										
P I T a o y t e a r, I s	16										
	17										
	18										
	19		1								
	20				11111	11111			1		

DOUBLE DOWN DON'T DOUBLE DOWN

Player totals of 10 and 11 are excellent hands on which to double down, even when the dealer's face-up card is an ace. (As mentioned, in Atlantic City, the dealer is not allowed to peek at his hole card until he acts upon his own hand.) This doesn't affect the double down or additional wager in a split hand; if the dealer does in fact have blackjack, only the original wager is lost, and not the extra amount doubled down or wagered for a split hand.

Think of a double down bet this way: Pretend that the dealer's face-up card is a **6**; with a **6** the dealer has the lowest probability of reaching a hand of 17 to 21 and the greatest chance of busting. If you as a player knew this, you'd wager more, especially if you knew what your hand would be. That's the advantage doubling down gives the player.

The exact cases of when to double down and when not to are as follows: Double down on a soft 13 through 16 when the dealer's face-up card is a 4, 5, or 6. Even though soft 13s, 14s, 15s, and 16s are weak hands, the player is wagering that the dealer showing a 4, 5, or 6 will probably bust.

Double down on a soft 17 or 18 or a count of 8 when the dealer's face-up card is a 3, 4, 5, or 6.

Double down on a soft 19 when the dealer's face-up card is a 5 or 6. Double down on a 9-count when the dealer's face-up card is a 2, 3, 4, 5, or 6.

Always double down on a 10-count, except when the dealer's face-up card is a 10-count card.

Always double down on a count of 11, regardless of the dealer's face-up card.

This is the only maneuver allowed the player in which the betting limit may be exceeded, in this case by up to twice the original wager. A wise player can make excellent use of this option.

#### STRATEGY ON INSURANCE BETTING

When the dealer's face-up card is an ace, the player has the option to place an insurance bet, wagering that the dealer has blackjack.

Before the dealer looks at his hole card, a bet of half the amount of the player's opening wager is placed on the insurance line. Insurance bets pay off at 2-1 odds, though the original wager that the player opened with is lost when the dealer has blackjack. If the dealer does not have a 10-count card in the hole, no blackjack, the player loses his insurance bet but his original wager remains until the hand is settled.

A 52-card deck holds sixteen 10-count cards. The odds with the deck untouched are 35-16 that the hole card is a **10**. Of course once a few cards are dealt, the chemistry of the deck changes. But for purposes of estimation we use the deck's original count. The odds that the dealer's hole card is a **10** (35-16 or 2.1875-1) yields greater than 2-1 odds by almost

6% on any given hand. So that generally, on any given hand, it would be unwise for the player to make an insurance bet.

However, if the player is counting cards and has noted, for example, that only two 10-count cards have passed in 26 cards dealt, he will know that more than half of the remaining deck will be made up of 10-count cards. In this case it is in the player's favor to make an insurance bet, as the odds are that the dealer holds a 10-count card.

When the player is counting cards and knows the deck to be poor in 10s, the chances are less likely that the dealer's hole card is a 10-count card, making it foolhardy to place an insurance bet.

Players also misuse the insurance bet when the dealer holds an ace and the player holds blackjack. Fearing a tie, he figures that by making an insurance bet he can at least win that bet. But if the dealer holds something besides blackjack, the player's paid off at 3–2 odds for the blackjack, and loses the insurance bet. The 50% loss negates the blackjack odds payoff. It is recommended to risk a tie with the dealer rather than to forfeit the 3–2 blackjack payoff.

Many gamblers know little or nothing of the germane ratios when making an insurance bet. They make this bet when their hand is very bad, hoping the dealer will have blackjack and save them; or they throw money away on an insurance bet when they have a very strong hand, such as a 19 or 20, and don't want to see it lose to the dealer's blackjack. Either way they buck unknown odds, which almost always spells disaster.

## ADVANCED CARD COUNTING STRATEGIES

Expert blackjack players do not lose, on the average. They profit by taking advantage of this important fact: At any time throughout play, and more so as the cards left in the shoe decrease, the cards will favor either the dealer or the player, often by a clear margin.

For that reason an expert blackjack player will often deviate from the rules discussed on hitting and standing, splitting pairs and doubling down. As was already mentioned, these rules are formulated upon a complete deck. Once the first card is dealt, the balance of the deck is altered.

Blackjack experts have trained themselves to remember the number of key cards that have already been dealt. They know that on a particular hand, the deck may be rich or poor in certain cards of value to either the player or the dealer.

For example, a card counter holds a 15 to the dealer's face-up 4. He knows, from keeping track of the discards, that the deck is very rich in 5s and 6s, yet all of the 10-count cards save one have been dealt. He chooses to hit, knowing that the chances of finishing with a hand of 20 or 21 are great, and his chances of busting, with few 10s and many 5s and 6s, are small. His move corresponds to the cards in the deck at that moment.

#### CASINO GAMBLING GAMES

Counting cards is more difficult than it used to be. At one time all games were dealt from a single deck. By dealing from two, four, six or eight decks of cards, reshuffled well before all the cards have been dealt, the card counter is robbed of a considerable mathematical advantage.

In a casino that deals from a single deck (if one still exists!), pit bosses know what to look for in a card counter. Any gambler who increases or decreases his bets dramatically, and, if a shuffle is called, removes the wager, is a sure card counter. A player who attracts the pit boss's attention, either by increasing bets tenfold every so often or by appearing consumed with concentration, will invite close scrutiny. A casino official may attempt to distract the player by standing at his elbow or by calling for a reshuffle after every hand. Even with all of the hindrances and safeguards against card counting, a general impression of the contents of the deck is important and will alter the smart player's betting strategy.

#### COUNTING

Roughly speaking, 10-count cards favor the player and 5-count cards favor the dealer. This is because 10-count cards favor doubled-down hands (9s, 10s, and 11s) and bust the dealer's stiff hands of 12 through 16 (with which he must hit).

On the other hand, 5-count cards favor the dealer when he hits on those stiff hands, giving him a count of 17 or better. They don't do much for the player's doubled-down 9s, 10s, and 11s.

To a lesser extent, 2s, 3s, 4s, and 6s also favor the dealer. Aces favor the player. Since there are only four aces per deck, keeping track of them isn't too difficult.

A simple method of keeping track of the high and low cards is as follows: Consider 2s through 6s low cards. When one appears, count it as plus one. When any 10-count card or ace appears, count minus one. There are five low cards (2s, 3s, 4s, 5s, and 6s) and five high cards (10s, jacks, queens, kings and aces). At zero, the deck favors neither the player nor the dealer. If the deck tallies plus eight, that means many more low than high cards have been dealt, and the player should increase his bet. If the deck tallies minus four, the deck holds more low cards than high, and the player should make note. With some practice this method can become second nature and will yield a general idea of the cards not yet dealt.