

Index

- Ankeny, N., 169
arms race, 117
artificial intelligence, 123, 128
astragalus, 1, 3
Atlantic City, 4
- back game, 32
backgammon, 3, 7, 29, 47, 48
backgammon board, 29
Banzhaf, J., 121, 132, 133, 167
bar, 29
baseball, batting order, 51
baseball, batting orders, 73
baseball, team, 73
bearing off, 29, 30, 34, 35
Berlekamp, E., 103, 167
Berliner, H., 168
Bernoulli, J., 4, 167
betting systems, 90
bingo, 3, 71, 77
binomial coefficients, 83
binomial distribution, 79, 82, 85, 96
binomial theorem, 82
blackjack, 93, 98
blocking game, 31
blot, 29, 33
bluff, 135, 137
bluffing, 128, 141
bridge, 3, 51, 52, 67
bridge, duplicate, 75
call, 59
cancellation system, 91, 97
Cardano, G., 2, 6, 8, 167, 168
cards, 2, 3, 16
characteristic function form, 100
checkers, 3
chess, 3, 127, 128
chicken, game of, 115
chuck-a-luck, 3, 45, 49
coalition, 119
coalition, winning, 119
combination, 51, 53, 54, 73, 80
combinations, number of, 54
Conway, J., 103, 167
Coulson, J., 8, 167
craps, 3, 40, 43, 49
craps roll, 41
craps, casino, 42, 80
craps, street, 41
Crawford, F., 29, 36, 167
- David, F. N., 2, 167
de Fermat, P., 13
de Méré, C., 13, 26
Deegan, J., 121, 133, 167
Deep Blue, 3, 128
dice, 2, 7, 15, 26, 27, 32, 46
difference equations, 159
distributions, in bridge, 67, 75
dominated strategy, 109, 111, 130,
139

- don't pass, 41, 49
 Dostoyevsky, F., 8, 10, 79, 96, 167
 doubling cube, 3, 30, 36, 40, 48
 drop, 59, 71
- entering, 30, 48
 Epstein, R., 168
 equilibrium, Nash, 114
 events, disjoint, 20, 21, 23, 83
 events, elementary, 17, 22, 26, 46, 51
 events, independent, 14, 20
 expectation, 23, 41, 79, 111, 137, 147
 expected value, 23, 27, 67, 156
 experiment, 20, 79
 exponential function, 85
 extensive form, 100
- factorial, 53, 54
 fair game, 23, 28, 49, 161
 Fermat, P., 2
 field bet, 49
 finesse, 69, 71
 flush, 56, 58, 64, 136, 138
 four of a kind, 56
 free odds, 43
 frequency chart, 84
 full house, 56, 59
- gambler's ruin, 158
 gambler, casual, 5
 gambler, compulsive, 5
 gambler, professional, 5
 Gamblers Anonymous, 5
 game bidding, 75
 game theory, 3, 99
 game tree, 101, 124
 game, n -person, 118
 game, against nature, 99
 game, normal form, 130
 game, reduced form, 109
 game, two-person, 105, 137
 game, weighted voting, 119
 game, zero-sum, 107, 137
 games, extensive form, 100
 geometric progression, 161
- go, 3
 Gould, S., 167
 Grote, K., 157, 167
 Guy, R., 103, 167
- hardway bet, 49
 heuristics, 128
 HEXPAWN, 124, 133
 histogram, 84
 hole card camera, 136
 hole in show pool, 145
 horse racing, 3, 141
 house edge, 25, 43, 49, 67, 73, 143, 144, 147
 house odds, 20
 Huygens, C., 2, 167
- Illinois State Lottery, 147, 153
 independent trials, 21, 80, 82, 83, 85
 information set, 103
 insurance bet, 94, 97
 Internet gambling, 4
- jackpot, 27, 155, 157
 Jacks or Better, 62, 74
 Jacoby, O., 29, 36, 71, 167
 Java, 29, 43, 169
- Kasparov, G., 3, 128
 Keeler, J., 168
 Kemeny, J., 168
 keno, 3, 72, 73, 77, 147, 153
 Khayyam, O., 13
 Krailsheimer, A., 168
- Las Vegas, 135
 Leibniz, G., 4
 life insurance, 3
 linear programming, 113
 lotteries, 3
 lottery, 147, 156
 lottery ticket, 148
 lotto, 71, 153
 LUCKY STARS, 150, 153
- Magriel, P., 167
 majority game, 119

- Martingale, 90, 96
- matching pennies, 102
- mathematical expectation, 22, 23, 136
- Matheson, V., 157, 167
- maximin, 110, 130
- maximin strategy, 110
- MEGA MILLIONS, 153, 154
- Mezrich, B., 95, 167
- minimal winning coalition, 120, 132
- mixed strategy, 137, 141
- mixed strategy solution, 131
- Monte Carlo, 4
- Morgenstern, O., 3, 99, 168
- morning line, 141
- Motif backgammon, 29, 169
- MWC, 120, 132

- n*-person game, 100, 120
- Nasar, S., 167
- Nash equilibrium, 114, 115, 132
- Nash, J., 114
- natural roll, 41
- Nevada, 4
- Niven, I., 82, 168
- nonsense, game of, 101, 105
- nonzero-sum game, 113
- normal approximation, 88, 96
- normal distribution, 85
- normal form, 100, 130

- odds, 69
- odds, against, 18
- odds, for, 18
- odds, free, 43
- opening moves, 31
- optimal mixed strategy, 113, 139
- optimal strategy, 102, 109, 131, 139
- Ore, O., 7, 168

- Packel, E., 121, 133, 167
- pari-mutuel betting, 141
- Pascal triangle, 82, 95
- Pascal's wager, 25
- Pascal, B., 2, 13, 25, 26, 168
- pass bet, 41
- pat hand, 63

- Pensées, 26
- permutation, 51, 53, 54
- permutations, number of, 54
- Phillies, 82
- place, 52, 141
- place pool, 144
- point, 41
- poker, 3, 27, 55, 128, 135
- poker probabilities, 57
- poker, betting, 59
- poker, draw, 62
- pot limit, 136
- pot odds, 61
- POT OF GOLD, 148, 151
- power, 100, 120
- power index, 120, 132
- prisoners' dilemma, 117
- probability, 13, 17
- probability rules, 20, 21, 142
- problem of points, 14, 26
- pure strategy, 109

- raise, 59
- randomizers, 3
- Rapoport, A., 168
- Reese, T., 169
- Reiley, D., 140, 168
- reinforcement schedule, 5
- repeated play, 79, 118
- Robertie, B., 29, 168
- roulette, 3, 24, 54, 88
- roulette wheel, 5, 84
- roulette wheel, American, 18, 24, 27
- roulette wheel, European, 27, 79
- roulette, American, 20, 91
- royal flush, 63, 65
- running game, 31

- Saari, D., 123, 168
- saddle point, 110, 131
- safe point, 29
- sample space, 139
- Scarne, J., 169
- selection, with replacement, 53
- selection, without replacement, 16, 27, 53, 72

- seven card stud, 58
- Shames, L., 168
- Shapley, L., 121, 132, 168
- show, 52, 141
- show pool, 144, 146
- Shubik, M., 121, 132, 168
- simple game, 119, 120
- simple game, improper, 132
- simple game, proper, 132
- Singleton, R., 168
- Sklansky, D., 169
- slam bidding, 75
- slot machine, 5, 27
- Snell, L., 168
- Spencer, S., 168
- sports betting, 24
- St. Petersburg paradox, 28
- standard normal curve, 85
- Steiner, G., 168
- Stoner, J., 167
- Straffin, P., 114, 168
- straight, 57, 64
- straight flush, 56, 63
- strategy, 102
- strategy, dominated, 111
- strategy, mixed, 111, 130, 131
- strategy, optimal, 131
- strategy, optimal mixed, 113
- strategy, pure, 130
- surrender, 98
- system, blackjack, 94
- system, cancellation, 91
- system, Martingale, 90
- Texas Holdem, 128, 135, 138, 140
- Thorp, E., 94, 168
- three of a kind, 57, 74
- Tic Tac Toe, 103, 127, 129
- totalizator, 141, 143
- tripling cube, 48
- Trump ticket, 157
- twenty-one, 93
- two pair, 57, 74
- two-person game, 105, 113, 137
- Tyndall, W., 168
- United Nations Security Council, 120
- United States Congress, 122
- University of Alberta, 136, 141
- Urbancic, M., 140, 168
- video poker, 62, 74
- vigorous, 24
- von Neumann, J., 3, 99, 113, 116, 168
- Walker, M., 140, 168
- weighted voting game, 119, 132
- win, 141
- win pool, 143
- winning coalitions, 119
- yahtzee, 49
- Yankees, 82
- zero-sum game, 107, 113, 129, 137
- zodiac, 150