# Chapter 1 Introduction

FROM GAME TO PROBLEM

1.1 The game of chess as we know it had its origin in India in the sixth century AD, although it may have had earlier roots in China. Endgame studies and chess problems are offshoots of the game which go back to the heyday of Arab chess in the ninth century. Studies are composed positions in which White is to win or draw. Orthodox problems are composed positions in which White is to mate in a stipulated number of moves. There is also a fairy world of problems with unorthodox stipulations, unorthodox pieces or other unorthodox conditions.

1.2 The development of studies and problems from the game can be illustrated by examples. In the game it is not uncommon to arrive at a position in which the side to play has only one move to win or draw. **A** is a celebrated instance of chess blindness in which Black resigned, realizing that he must lose a piece, whereas he could have won dramatically by Bg1. **B** is an endgame position (from a ten-game match played at five seconds per move) which White won by the brilliant Ra8+.

A
GAME POSITION
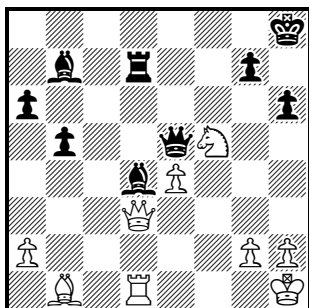
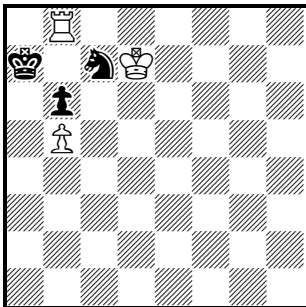I. von Popiel *v.* G. Marco
Monte Carlo, 1902
Black to play

1...Bg1 (>2.Qxh2#) 2.Kxg1 (or Sg3)
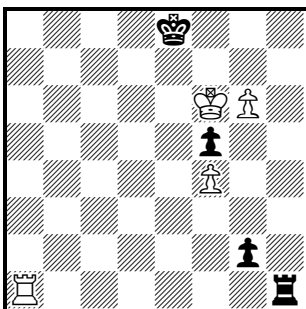Rxd3 wins

B
GAME POSITION

J. R. Capablanca *v.* Em. Lasker
Berlin, 1914
White to play

1.Ra8+ Sxa8/Kxa8/Kb7
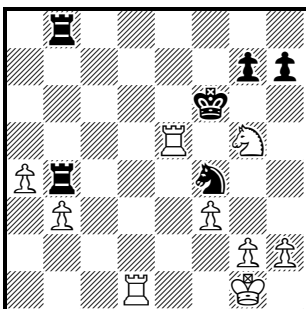2.Kc8/Kxc7/Ra7+ wins

C
ENDGAME STUDY

P. Stamma
1737
White to win

1.Rg1 Rxg1/Kf8
2.Pg7/Rxg2 wins

D
GAME POSITION

A. Tolush v. J. Randviir
Parnu, 1947
White to play

1.Rd6+ Kxe5 2.Sf7+ Kf5 3.Pg4#

1.3 From such examples of unique winning moves, both incidentally involving sacrifice, it is a short step to the composed. endgame study. **C** is an eighteenth-century example, with a similar initial sacrifice. Two moves are sufficient to demonstrate the win, although the actual mate could take a good many more.

1.4 **D** is another game position of a different sort in which White, having already established a material advantage, found a surprising way to win quickly by Rd6+, with mate in two more moves. Here we see the makings of a problem with White required to mate in a stipulated number of moves. For comparison let us examine the three-mover **E**, which repeats the sacrificial theme. Although it is not a task or record problem, it demonstrates many basic problem features and will serve as an example for the rest of the chapter.

E
PROBLEM (#3)
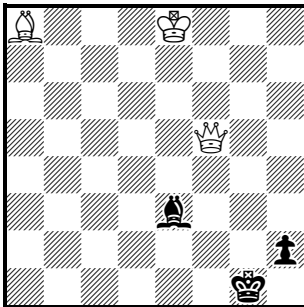
S. P. Tsirulik (after R. H. de Waard)
4th. Hon. Ment., Ukrainian Tourney, 1956 (V)

Try 1.Qf3?	(>2.Qg2#)		
1...Ph1=Q(or B)	2.Qg3+	Kf1!	
Key 1.Bh1	(>2.Qf3	and	3.Qg2#)
1...Kxh1	2.Qf1+	Bg1	3.Qf3#
1...Bf2	2.Qb1+	Be1	3.Qxe1#
1...Bf4	2.Qxf4	Kxh1	3.Qf1#

1.5 The key of **E** is not the obvious 1.Qf3 but the corner-to-corner sacrifice 1.Bhl. This leads to four different lines of play. The first line, threatened by the key and occurring after all random moves of the BB, is 2.Qf3 and 3.Qg2#. (We shall find that all problem keys which do not give check either establish a threat — sometimes more than one — or put Black in zugzwang, i.e. oblige him to make a move to his disadvantage. Problems of the former type are called threat problems, and of the latter type block problems. The distinction is both evident and important in two-movers, and is recognized in their solutions in this book; but it is ignored in the solutions to some longer problems in Part Three, particularly where the BK is mobile and obscure threats never materialize.) The other three lines of play follow defensive moves by Black which defeat the threat but at the same time weaken Black's position so as to allow White another way to mate. The three resulting mating positions are all 'model mates', with every piece (except the WK) involved in the mate and each square in the BK's field guarded once only. White's second moves in all four lines are different, as are also White's mating moves. Finally, there are no short mates in less than the stipulated three moves and no duals (alternative moves for White), even when the

BB makes a random move. Such technical perfection in a problem is relatively rare.

1.6 We can see from examples **A-E** that studies and problems differ from game positions in two important ways. First, they are composed, with the intention in most cases not only of testing the solver but also of exhibiting some element of artistry. Secondly, they omit any unnecessary force: if **D** was to be presented as a problem (White to mate in three), at least six pieces could be removed from the initial position. Problems differ from studies in stipulating mate or stalemate within a given number of moves.

ANATOMY OF THE PROBLEM

1.7 It is important to understand the anatomy of the problem. This comprises the initial position, the stipulation, the lines of play and the final position. We can continue to use **E** as an example.

Initial Position

1.8 By established convention the initial position in orthodox problems, and in all the other types of problem included in this book, must be legal, meaning that it could have been arrived at, however improbably, in an ordinary game played according to the laws of chess. The process used to prove or disprove the legality of an initial position is called retroanalysis, and often involves counting pawn-captures against the other side's missing pieces (see for example **83***). It has been estimated that the number of different positions that could arise legally in a game of chess is more than 10^{30}, but it is impossible to guess how many of these might form the initial position of a sound problem, as **E** does.

Stipulation

1.9 The stipulation of an orthodox problem is White to mate in so many moves, three in the case of **E**. In addition to orthodox problems, often called *direct mates*, this book includes the following unorthodox types: *direct stalemates*, in which White stalemates Black in so many moves; *selfmates* and *selfstalemates*, in which White plays first and forces Black to mate or stalemate him in so many moves; *helpmates* and *helpstalemates*, in which Black plays first and helps White to

mate or stalemate him in so many moves; and the *series-mover* forms of these six types, in which the starting side plays so many consecutive moves, ending in or leading to an immediate mate or stalemate. In all these types the normal rules of the game apply, except that in seriesmovers check may only be given on the last move of the series. I also include two examples of more heterodox forms of selfmate in 15.8 and one in 19.4.

F
PROBLEM (h#2)
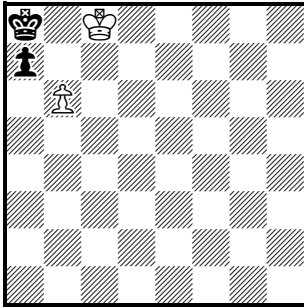
A. H. Kniest
Deutsche Märchenschach-Zeitung, 1932
Black plays first.

1.Pa6 Pb7+ 2.Ka7 Pb8=Q#

1.10 Since this book is concerned with tasks and records, it is interesting to ask how many different stipulations may be validly applied to a single initial position. The record is held by **F**, which cannot carry any orthodox stipulation because it must be Black's move. Since its first appearance as a helpmate in two, different composers have labelled it as a series-helpmate in eight (5.Pal=B 8.Ba7 for Pb7#); as 'White retracts one move, then mates in one' (retract Kc7xSc8 for 1.Pb7#); as 'Black, playing repeatedly two maximum-length moves followed by one minimum-length move, gives series-mate in forty-six' (5.Pal=R 6.Ra2 18.Ra6 21.Rh2 33.Rh6 36.Ka7 39.Ka6 42.Kb6 44.Ra1 45.Kc6 46.Ra8#); as 'Who wins?' (Black by 1.Pxb6); and with over two hundred other stipulations of increasing complexity and heterodoxy.

Lines of Play

1.11 The core of the problem lies in the actual line(s) of play from key to mate(s). But first we must notice *set play* and *try play* (collectively known as *virtual play*), both of which were greatly developed in the 20th century to enhance the difficulty or the artistry of problems. It may be that in the initial position, if it were Black's turn to play, some of his moves would allow White to mate in the required number of moves. Such lines constitute set play, which is often disrupted by the key (although this is not

the case with the set line in **E**, 1...Bf2; 2.Qb1+ Be1; 3.Qxe1#). Set lines are conventionally indicated by starting 1..., and they appear at the beginning of the solution. Full-length set lines of play are one move shorter than full-length actual lines, lacking the opening key move.

1.12 A try is a plausible move which a solver might try in his search for the key and which would solve the problem but for one Black defence. Such a try is 1.Qf3? in **E** which threatens immediate mate by Qg2 and is only refuted by 1 ... Ph1=Q/B; 2.Qg3+ Kf1! Tries are conventionally indicated by a question mark, and their refutations by an exclamation mark, and they appear in the solution after any set play and before the actual play. Full-length try lines of play are one move shorter than full-length actual lines, lacking the final mating move.

1.13 Actual lines of play start with the key move, which in orthodox problems should be unique, as in **E**. Two or more keys are sometimes stipulated in heterodox problems, especially helpmates, but only rarely and for special purposes in direct mates. One such case would be **G**, a construction task cast in the form of a problem, which shows the two-mover record of 117 keys. All other problems in this book have one key only.

G
CONSTRUCTION TASK (#2)
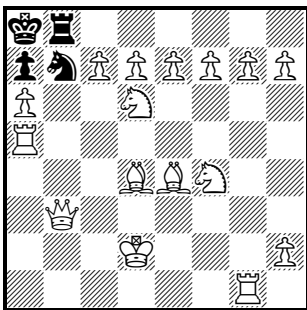
E. Luukonen
Uusi Suomi, 1936

1. any
All White's 117 moves lead to mate in two.

1.14 After the key comes Black's first move, then White and Black continuations (if the problem is longer than two moves), and finally the mating move or moves. Problem nomenclature is not used consistently in this area, but lines of play which vary according to Black's first move (of which there are four in **E**) are usually called variations, and lines of play which vary according to later Black moves (of which there are none in **E**) may be called subvariations.

Final Position

1.15 A problem will normally have as many final positions as it has different actual lines of play, unless their difference lies only in the order of the moves involved. So **E** has four final positions, three of which exhibit model mates. It is important not to confuse the total final position with the mate, and the more so because the word 'mate' is itself used ambiguously. The *Oxford English Dictionary* defines 'mate' as follows: 'The state of the king when he is in check and cannot move out of it (involving the loss of the game to the player whose king is so placed): = CHECKMATE. Also, the move by which the king is checkmated.' The first part of the definition leads to 'mate = mating position (or mating net)', i.e. those parts of the total final position which are directly involved in the checkmate — in the threat line of **E** the position of all pieces except the WK and BB, and in the other three lines the position of all pieces except the WK. The second. part of the definition leads to 'mate = mating move'. Confusion between these two meanings, and varying interpretations of each of them, have led to differences of view about records involving e.g. en passant captures, pin-mates, concurrent mates, battery mates, etc. In this book I use the longer terms in preference to 'mate' where there is any danger of ambiguity. Otherwise I generally use 'mate' to mean 'mating move', except in such established phrases as 'model mate' or 'mirror mate' which refer to mating positions.

PROBLEM CONVENTIONS

1.16 I have already mentioned the general convention of legality in 1.8. Special conventions are needed for castling and for en passant capture keys. Castling is allowed at any stage of a problem so long as it cannot be proved by retroanalysis to be illegal. Per contra, en passant capture keys are only allowed if it can be proved by retroanalysis that the other side has just advanced the relevant pawn two squares.

1.17 There is another general convention which says that, although pawn promotions can take place in the course of a problem's solution — indeed promotion tasks figure prominently in this and other task collections —- and although promotions may have taken place in the previous play (see again for example **83***), there should be no promoted pieces in the initial position. The ban applies not only to second queens and third minor

pieces, but also to obtrusive pieces. In theory these are any pieces which can be proved by retroanalysis to have resulted from promotion, but in practice only obtrusive bishops (or very occasionally rooks) are noticed, like the BBs on h1 in **524** and on d4 in **541***. I belong to a minority of problemists who believe that these obtrusive pieces, which can indeed be very unobtrusive, are not offensive, and that it would be better if the convention had merely stated that neither side should start in the initial position with more than the ordinary force of one queen, two rooks, two bishops of opposite colours and two knights. That said, I give preference in this book to settings without obviously obtrusive pieces.

TASKS AND RECORDS

1.18 The chess problem is arguably the highest type of problem or puzzle. It is much older and more widespread than the draughts or bridge problem. It is not confined by language like the crossword puzzle. It is less abstruse than the mathematical problem. Furthermore, its artistic content is richer and more easily appreciated than in other types of problem. Formal and strategic patterns abound, exhibiting such ideas as thematic unity, economy, paradox, reciprocity, asymmetry, and so on. This explains why the chess problem has an exceptionally high ratio of composers to solvers. Sometimes indeed the artistic element overshadows the original puzzle element, although ideally both elements should be present and in good balance. A general survey of the chess problem which gives due weight to its artistry is *Chess Problems: Introduction to an Art* by Michael Lipton, R. C. O. Matthews and John Rice (1963).

1.19 This book has a narrower scope. It collects and elaborates the various articles on chess problem tasks and records which I have published in *The Problemist* and other periodicals over the past fifty years. Its main focuses are two-move themes, pawn promotion and length records. So it is not even a comprehensive treatment of the whole field of tasks and records. Indeed, no such book exists. To get a broader view of the subject the reader must consult a number of books like those mentioned in the following paragraphs, as well as a host of specialized studies and articles.

1.20 'Task = problemski rekord' says the index to Nenad Petrović's *Sahovski Problem* (1949), and both Alain White and T. R. Dawson made a similar identification. White described task

problems, in the introduction to *Les Tours de Force sur l'Échiquier* (1906), as 'advances in constructive achievement' and 'problematic world's records', and defended them as having historical, if not always artistic, importance. Nine years later, in the introduction to *Tasks and Echoes* (1915), he redefined the contents of *Tours de Force* as 'maximum tasks' and applied 'task' more loosely to any problem showing a cumulation of like, or even unlike, elements. But Dawson, in the introduction to *Ultimate Themes* (1938), criticized White's approach as 'hazy', and again equated task problems with records by defining them as those 'which have maximum or minimum characteristics in relation to one or more of their space, medium, limitations, and thematic features'. Whereas White had apologetically defended such problems, Dawson claimed to see in chess problem maxima and minima 'the only results of chess problem work of any essential reality'.

1.21 There are important differences of attitude involved in this discussion. Some problemists are not interested in tasks and records unless they are also 'good chess'. They stress the aesthetic; Dawson stresses the mathematical; and White tries to balance the two. Before l state my own position, which is close to White's, it will be useful to recognize and explore the distinction between 'tasks' and 'records'.

1.22 A 'task', following the ordinary meaning of the word, is a definable achievement, usually difficult and often new, which a composer sets himself or has set for him by others. (Godfrey Heathcote gave a similar definition in 1907.) It will normally, but not always have a numerical expression to it, and it may be a new record. (e.g. 7 unpins of a WQ in a two-mover — not yet achieved), but equally it may not be. A good example from the past would be the 1,000 years old **H**, a famous Arabian ending (or *mansuba*) called 'The Water-Wheel', in which the BK is driven twice round the board and then mated on his home square. (This is not to be treated or judged as a modern problem. White plays down the board; the K's home square is on his own colour; the Q is a Fers; the B is an Alfil; there have been more pawn-captures than there are missing men; and Black could defeat White by 10...Pxb4.) Other medieval and nineteenth-century problems exhibit a string of sacrifices without aiming at an absolute numerical record. More modern examples would be non-numerical tasks (e.g. a letter problem like **696**) or good settings falling short of the record. I quote a number of these last in this

book, and some of them could arguably be called records with a particular aesthetic limitation, such as a quiet (i.e. non-checking) key, no duals, etc.

H
ARABIAN MANSUBA (#36, with BK mated on e1)
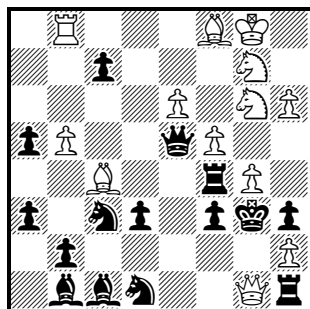
c. 9th century AD

1-36. Sh5-h4-g3-g2-f1-e1-d2-c2-b3-b4-c5-c6-d7-xe5-f6-g6-h5-xf4-g3-g2-f1-e1-d2-c2-b3-b4-c5-c6-d7-e5-f6-g6-h5-h4-g3-xf3#. (WSs move alternately.)

1.23 A 'record', the narrower term, is a numerical maximum (or minimum) *à la* Dawson; and the records in this book are accordingly all expressed in figures. ('Record' is less ambiguous than 'maximum task'. I prefer the term 'theoretical maximum' for a record which cannot be exceeded, e.g. 6 discovered mates by a WK in a twomover.) The numerical element in chess is strong, and the record problem also has its roots in chess history, going as far back as the early Indian knight's tours in which a knight visits every square on the board once. But it is essentially a modern interest, to an important extent associated with the modern concentration on two-move variations. The growing interest in records may be related to the slow exhaustion of the artistic possibilities of problems. But this is probably too pessimistic a view. While a few composers are particularly noted for records — they might be called 'taskmasters' — most well-known composers have tried their hand at them at some time.

1.24 André Chéron takes a similar line in the preface to *Le Joueur d'Échecs au Pays des Merveilles* (1982). For him 'le tour de force (= task)' and 'le record' both belong to 'le point de vue sportif du problème d'échecs', whereas 'le chef-d'œuvre' or masterpiece belongs to 'le point de vue artistique'. According to Chéron, the 'task' is the realization of some spectacular idea, almost always difficult to construct, whereas the 'record' is the greatest number of repetitions of the same element so far achieved, provided it is dual-free — a point on which he insists and to which I return below.

1.25 On these definitions, all records are tasks, but not all tasks are records. They can generally be grouped under five heads:

(a) The maximum powers of the pieces, particularly in two-movers.

(b) The cumulation of strategic or other elements, either successively in longer problems or side by side in the variations of shorter problems (including virtual play)

(c) Length records.

(d) Patterns, as switchbacks, merry-go-rounds, stars, etc., or the more formal patterns of modern two-movers and three-movers.

(e) Construction records.

All these groups are represented in this book, although **G** is the only construction task: a full account of them can be found in Anthony Dickins's *A Guide to Fairy Chess* (1969). Within each group composers have moved on from simple tasks to complex ones, e.g. duels between White and Black pieces, strategic moves by particular pieces, length records with minimal force, etc. There is yet a further proliferation of specific themes and subthemes, mainly strategic and often bearing the name of their originator, which have produced many fine problems that could be called tasks or subtasks, but I do not have the space to cover more than a few of these.

1.26 It should be noticed that the problem composer often builds on the work of others. Thus, in the case of **E**, S. P. Tsirulik improved on a seven-piece setting by R. H. de Waard published forty-three years earlier in 1913: hence the label 'after R. H. de Waard'. Tsirulik's setting, which despite this partial anticipation received an honourable mention in a composing-tourney award, had WK on a8 and WB on d5. I have moved the WK to avoid a dual choice for White after 1....Ba7 of 2.Qf3 or Kxa7, and the WB to avoid a cook (alternative solution) by 1.Qf3 Ph1=Q/B; 2.Qg3+ Kf1 3.Bc4# (impossible in Tsirulik's setting because the WB is pinned). These relatively trivial alterations are indicated by the label 'V' for 'version'. The reader will find a number of versions scattered through the book. They mostly represent corrections of cooks or other flaws in the original setting, or worthwhile improvements in construction. Because I hope to convey the historical flavour of task composition over the past 150 years, I

have generally not adopted modern versions where the improvement is slight or merely represents current composing fashions.

1.27 This process of improvement has a particular bearing on problem records, since it is possible for a later composer to achieve a record, or an improved setting of a record, by making a relatively small addition to the work of a forerunner. As Michel Caillaud put it in a letter to me, 'An athlete, for example, beats the record all by himself, whereas the record composer goes over a wall but very often another composer has put a ladder against the wall. Without the first composer who did the creative work, the record would not have been established; the work of the second composer is often more technical than creative.' This underlines the importance of giving credit in such cases to the first composer by including his name in the attribution on the diagram (as in **E**).

1.28 To sum up, it is evident that record problems have an objective of their own, overriding the puzzle element and the artistic element and the balance between the two which, as I have said, is the hallmark of the best chess problems. Consequently many of the problems which figure in this book have ugly or uneconomic positions, obvious or brutal key moves, and other flaws. Some problemists, following Dawson's line of thinking, are unconcerned about this. They argue that subjective aesthetic judgements are irrelevant to records which are objectively determined, and that if an additional criterion is required to rank different realizations of the same task that too should be objective, so that one would always choose e.g. the earliest or the most economical setting or one that shows the task as simply as possible without other distracting features.

1.29 My position is somewhat different, since I believe that artistry is the problemist's primary aim, and that tasks and records serve to show how far the artistic medium and material can be stretched. In this book, therefore, I try generally to quote what I judge to be the best examples, rather than the earliest or most economical. I mark good problems with one star (*), and very good problems (or masterpieces) with two stars (**). At the same time I recognize that some other exceptional records have a merit of their own, regardless of their aesthetic defects, and I mark these with a dagger (†).

Accuracy

1.30 The chess problem places a high value on accuracy, meaning that White should not have duals, i.e. alternative moves in reply to a single Black move, in the course of the solution. (I use the traditional terms 'major dual' for a White dual move which is not separately forced elsewhere in the solution, and 'minor dual' for one which is so forced, but without attaching too much importance to the distinction.) Accuracy is especially desirable in tasks. Chéron says flatly that for the purpose of records duals invalidate any variation in which they occur and spoil the whole problem if they occur in the mainplay. As far as two-movers are concerned, I adopt Chéron's approach and. extend it to virtual play, not counting for record purposes dualled variations in set or try play or tries with more than one refutation. The only exception to this general requirement for accuracy is that, if on the mating move White can promote a pawn to both queen and. rook, or both queen and bishop, the underpromotions are by established convention ignored and not treated as duals. Promotions by Black to rook or bishop immediately before White's mating move (whether defences or refutations) are ignored, except in the special case of combinative separation (see 5.6), but they are not ignored on earlier Black moves.

1.31 Duals which occur outside the mainplay are not so objectionable, even in two-movers; and in longer problems the rule against duals is generally less strict. Collections of longer problems, like Walter Jørgensen's *252 Skakopgaver fra 10-342 Traek* (1987), include many examples with some duals in the mainplay. The seriousness of such duals is to some extent a matter of taste, but it is probably safe to say that they are acceptable if they do not obscure the basic logic of the solution. When it comes to length records, however, I normally require that they must contain at least one full-length line in which White's play is uniquely forced throughout, in which case I describe them as dual-free length records. Although this definition may appear arbitrary at first sight, it is in fact in line with problem tradition, which has generally been willing to overlook duals in alternative full-length lines, even when those lines are not otherwise inferior. In records for promotions scattered through the solutions in Chapter 14, I do not, as Chéron does, disqualify promotions in variations with subsequent duals, but here again the main line must be dual-

free. It is indeed this absence of duals in the main line right up to the final mate which qualifies computer-generated positions like **866** and **872** as problems rather than endgame studies. The handful of even longer problems with duals in Chapter 18 earn their place because they not only meet the test described above but also outdistance the dual-free record by a considerable margin. This is notably true of O. T. Bláthy's famous selfmate of more than 300 moves, **937†**, which is the centre-piece of that chapter.

Measurement of Records

1.32 In counting White moves (including mating moves) for record purposes I again follow Chéron's general approach. Two moves are only different if (a) different men move, even like men to the same square, or (b) the same man moves to different squares or (c) the same pawn promotes on the same square to different pieces. Apart from (c), two moves by the same man to the same square are treated as one, even if they present certain differences. These differences might be considered strategic (e.g. if there was a single check in one case and a double check in the other, or the BK was on different squares, or different Black pieces were pinned) or purely formal (e.g. if there was a capture in one case and not in the other, or different Black pieces were captured, or a pawn capture was ordinary in one case and en passant in the other). Some problemists take a broader view and count moves by the same man to the same square as different if they exhibit strategic differences, or even if they exhibit purely formal differences. On the other hand, some take a narrower view than Chéron and I, and do not count separately concurrent mates by a line-moving White piece along a line of pin, being no doubt influenced by the consideration that the mating position is not essentially different: this is exemplified in 2.13.

1.33 Similar differences arise in counting mating positions. For instance, I follow established practice in recognizing pure and model mates as different not only if any of the three conditions listed in 1.32 is fulfilled but also if (d) the BK is on different squares or (e) there is a change in either the White or the Black force affecting the BK's field. However, concurrent mates by a White piece attacking the BK from the same direction (e.g. by a line-moving piece capturing along a line of pin or by a WQ moving on to the same mating line) are not counted separately; nor are battery mates in which the moving piece of

the battery does not directly affect the BK's field in the final position (even though its action in shutting off or capturing a Black piece produces a distinct mating move). Again some problemists take a broader or narrower view, as described in 5.10-5.14. Wherever I depart from my main practice to quote records on a broader or narrower definition, I say so in the text and add the suffix (B) or (N) to the problem number.

1.34 In counting Black variations I follow general practice in treating as distinct all Black variations which lead to different White moves, whether those White moves are threats or not. In counting variations for two-move changed-play records, whether from set to actual or from try to actual play, I make a distinction of my own between *changed mates* and *changes*, as set out in 7.4. In some multi-phase problems (such as **312** and **321**) a higher record could be claimed if two or more tries with the same refutation were counted separately. However, I have come to the conclusion that such repeated refutations seriously devalue the task achievement and I have removed a number of examples that appeared in the first edition, and downgraded others.

1.35 Readers will find other conventions and distinctions explained as they arise through the book. For instance, in dealing with pawn records I sometimes distinguish between pawns on the second and seventh ranks, sometimes not. In general I try not to be dogmatic or finicky on semantic questions and to follow the broadest definitions that are acceptable to the majority of problemists.

1.36 When I set out to prepare this book, I thought that it might be a chore to collect and arrange the material, much of which was familiar to me. In the event it proved to be a delight, full of the pleasures of discovery and rediscovery. I hope that my readers will share this experience. I also hope that they will excuse the inclusion of so many of my own problems. Since the scheme of the book is of my own making, I have inevitably had to fill the gaps. I shall be delighted if others can improve on my efforts.

1.37 This edition should prove more user-friendly than its two predecessors, in that diagrams and their solutions appear side by side. In line with 1.30, solutions generally exclude dualled variations; but otherwise they are given in full, with the thematic variations (mainplay) listed before the others (byplay).