



THE PUZZLING SIDE OF CHESS

Jeff Coakley

DAYS IN THE MAZE

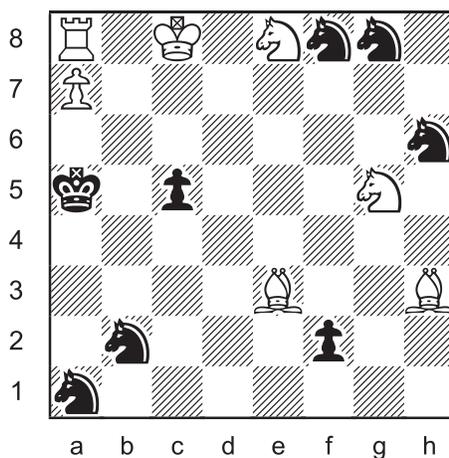
number 189

April 30, 2020

This column presents five new chess mazes plus the oldest known maze-like problem from the past. Our side theme is a tribute to an amazing athlete, Willie Mays.



Chess Maze 20



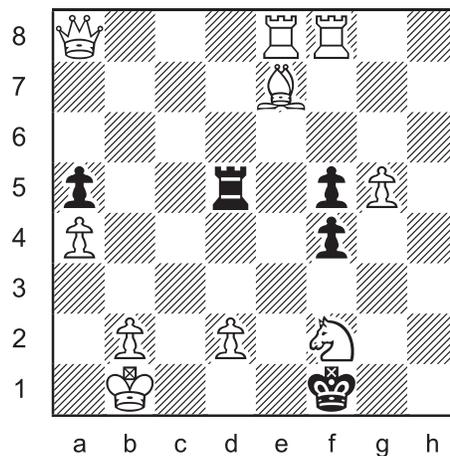
Rook Maze in 18

Only the white rook moves.

Find the shortest path to capture the black king, without taking any pieces or moving to a square attacked by a black piece.

The idea behind the first problem was the geometric staircase of the zigzagging rook. The goal in the next two mazes is to maximize the number of moves.

Chess Maze 21



Knight Maze in 29

Only the white knight moves.

Find the shortest path to capture the black king, without taking any pieces or moving to a square attacked by a black piece.



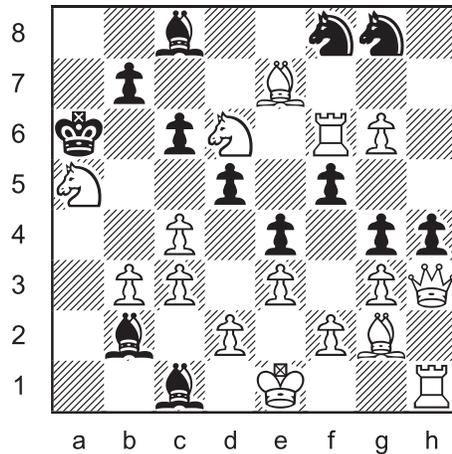
Willie Howard Mays, Jr.

Willie Mays is the greatest baseball player of all time. Born in Alabama in 1931, he began his professional career at age 16, playing for the Chatanooga Choo-Choos. In 1951 he signed with the New York Giants, earning *Rookie of the Year* honours. He remained a Giant for 20 years, staying with the team when they moved to San Francisco in 1957. He returned to the Big Apple for his final two seasons as a New York Met.

Forever a favourite of fans and fellow players, Willie was affectionately nicknamed “The Say Hey Kid”, he celebrates his 89th birthday next week on May 6.

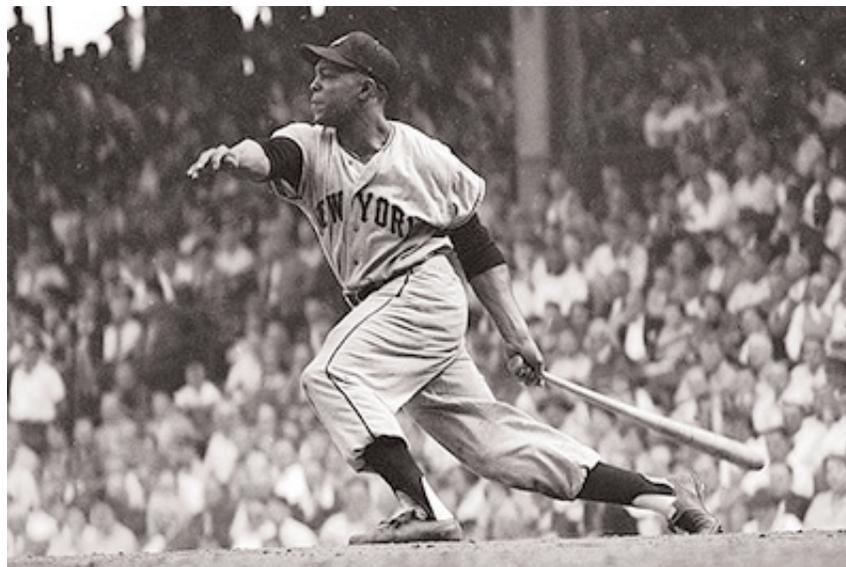
Mazes with maximum moves for rooks (30) and bishops (17) were given in column 69. Until now, no attempt has been made to set a record for queen mazes. Here it is. Easy to solve, hard to compose.

Chess Maze 22



Queen Maze in 25

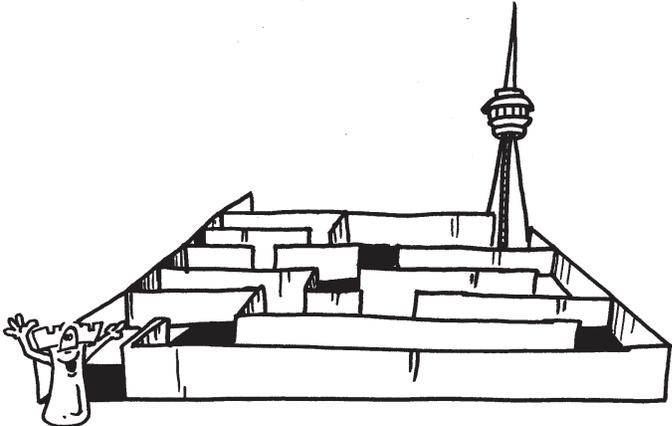
Only the white queen moves.
Find the shortest path to capture the black king, without taking any pieces or moving to a square attacked by a black piece.



Willie Mays was the complete player, excelling at the plate, on the bases, and in the field. His lifetime batting average was .302 with 660 home runs, ranking him 5th all time. He led the league in stolen bases four times and won the Golden Glove for center fielders 12 straight years.

Willie's signature play was the "basket catch". He caught routine fly balls with both hands near his waist, holding his glove palm up.

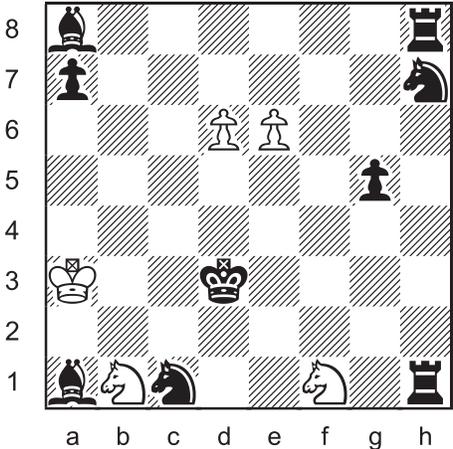
The origins of chess mazes were discussed in *Chess Mazes: Toronto Style* (column 69). “Toronto style” means that no captures are allowed. That stipulation is essential for a true maze.



Other people have published problems called “chess mazes”, but in all cases they have allowed captures. The compositions can be interesting, but they are better described as “series-movers”, a class of problems which includes series-mates. See *The Double Whammy* (column 2).

The next puzzle, by American composer Otto Wurzburg (1875-1951), is a hundred years old. It is the earliest maze-like problem that I am aware of. The king has 70 moves to get safely from a3 to f4. He may have to take a few pieces along the way.

Series-Mover



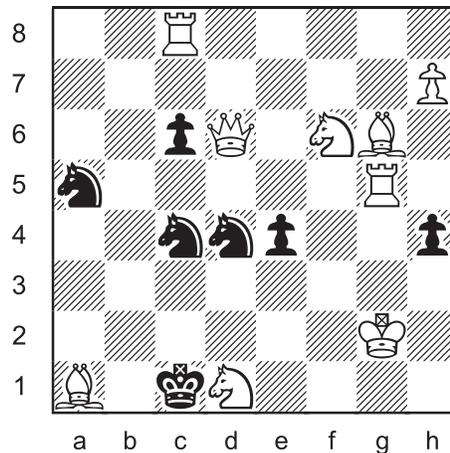
King Maze in 70

Only the white king moves.
 Find the shortest path to reach f4 without moving to a square attacked by a black piece.
CAPTURES ARE ALLOWED.

We return now to mazes with fixed borders. There are no shortcuts knocking down walls, cutting through hedges, or capturing pieces. The gauntlet must be run as it stands.

A pawn maze is actually three mazes in one. After reaching the 8th rank, the pawn promotes and continues its journey as a rook, bishop, or knight, with different paths and a different number of moves.

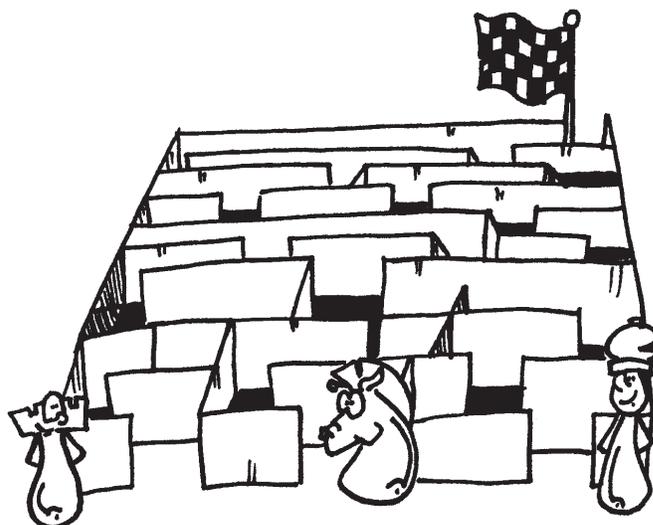
Chess Maze 23



Pawn Maze

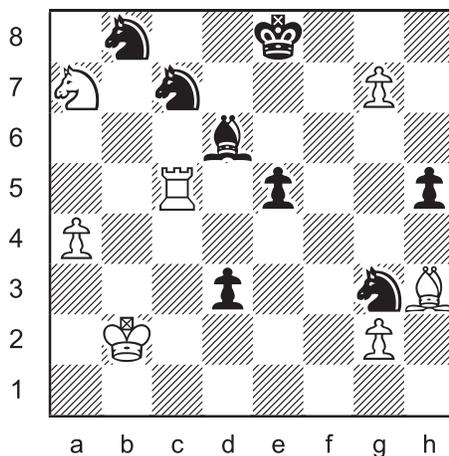
Which kind of promoted piece gets through the maze fastest?
Rook, bishop, or knight?

Only the white pawn moves. When it reaches the last rank, it may become a rook, bishop, or knight. But not a queen. After the promotion, only the promoted piece moves. Find the shortest path to capture the black king, without taking any pieces or moving to a square attacked by a black piece. Determine which pieces require the most and fewest moves.



Our final problem, number 24, is a new kind of maze dedicated to Willie Mays, who wore number 24 throughout his career. Three types of pieces (RBN) start on different squares and race to the black king. Who gets there first?

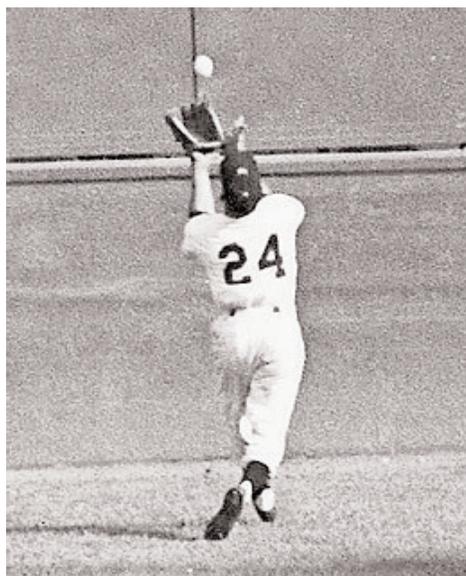
Chess Maze 24



Maze Race

Which kind of piece gets through the maze fastest?
Rook, bishop, or knight?

Each of the three white officers starts from where it stands.
Find the shortest path to capture the black king, without taking any
pieces or moving to a square attacked by a black piece.



*“The Catch”
World Series 1954 game 1*

1954 was a great year for Willie Mays. He had the best batting average in the majors (.354), was voted *Most Valuable Player*, and led the New York Giants to victory in the World Series!

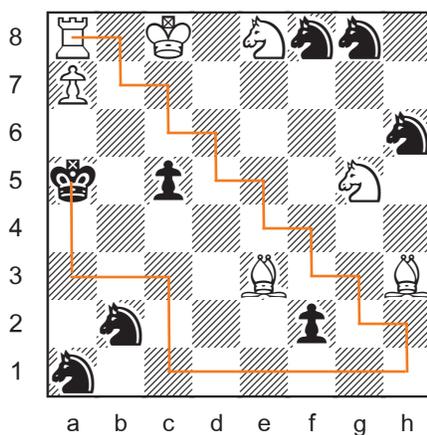
SOLUTIONS

Chess mazes 20-24 by J. Coakley, *Puzzling Side of Chess* (2020).

PDF hyperlinks. You can advance to the solution of any puzzle by clicking on the underlined title above the diagram. To return to the puzzle, click on the title above the solution diagram.

Archives. Past columns are available in the *Puzzling Side* archives.

Chess Maze 20



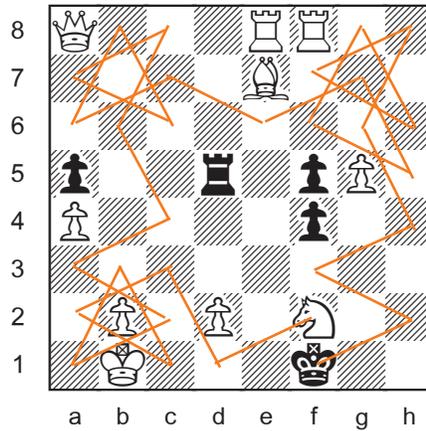
Ra8-b8-b7-c7-c6-d6-d5-e5-e4-f4-f3-g3-g2-h2-h1-c1-c3-a3xa5

Down the staircase.



“Say hey!”

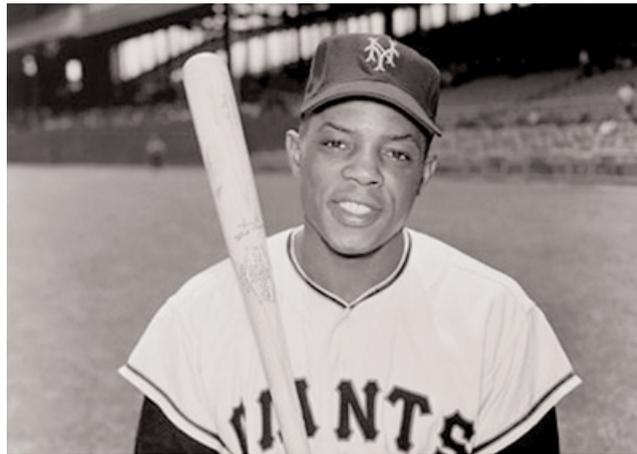
Chess Maze 21



Nf2-d1-c3-a2-c1-b3-a1-c2-a3-c4-b6-c8-a7-c6-b8
-a6-c7-e6-g7-h5-f6-g8-h6-f7-h8-g6-h4-f3-h2xf1

Twenty-nine moves matches the record length for a knight maze, first established in *Scholar's Mate* magazine (#113, June 2012).

Compare the maze path with the knight loops in column 155. Can anyone convert the 32 piece loops into a 30 move maze?



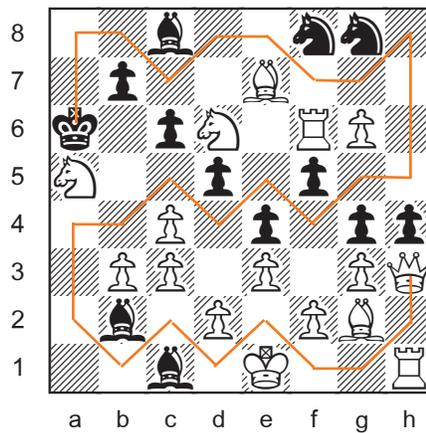
Hall of Famer Willie Mays

20 years on the National League All-Star team
Major League batting champion 1954
Major League home run leader 1955, 1962, 1965
Four homers in one game, April 30, 1961

Career totals:

660 home runs (5th all time)
22 extra inning home runs (1st)
2062 runs scored (7th)
3283 hits (11th)
1903 runs batted in (11th)

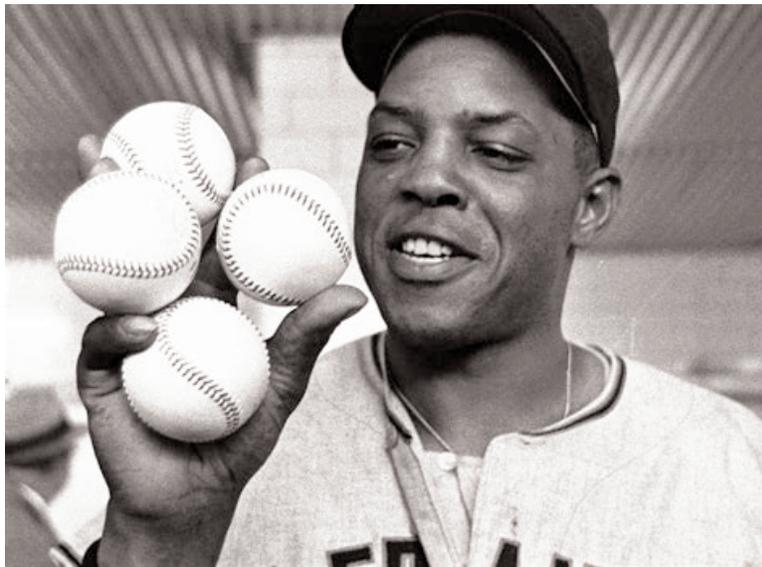
Chess Maze 22



Qh3-h2-g1-f1-e2-d1-c2-b1-a2-a4-b4-c5-d4
-e5-f4-g5-h5-h8-g7-f7-e8-d8-c7-b8-a8xa6

Twenty-five moves. 22 are single steps.

The longest queen maze previously published was 16 moves.
Winning Chess Puzzles For Kids Volume 2, 2010 (KK77).



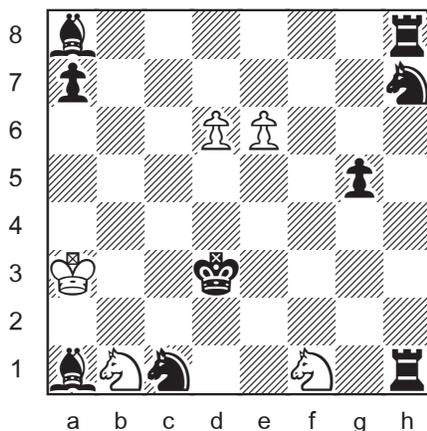
Except for one year, Willie Mays was the highest paid player in baseball from 1959 to 1972. His record setting salary of \$105,000 in 1963 (nearly a million dollars by today's standards) topped that of Yankee slugger Mickey Mantle by \$5000.

Pitcher Sandy Koufax of the Los Angeles Dodgers earned slightly more than Mays in 1967.

Series-Mover

Otto Wurzburg 1919

The Book of Extraordinary Chess Problems (1989 Stephen Addison)

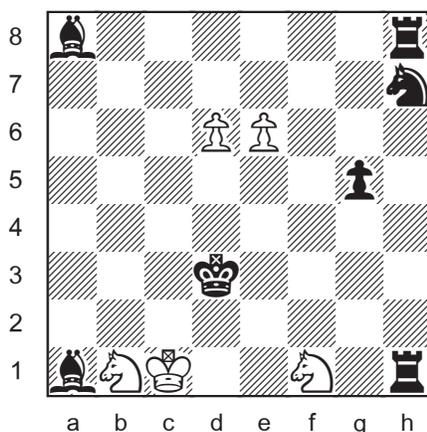


1.Ka4

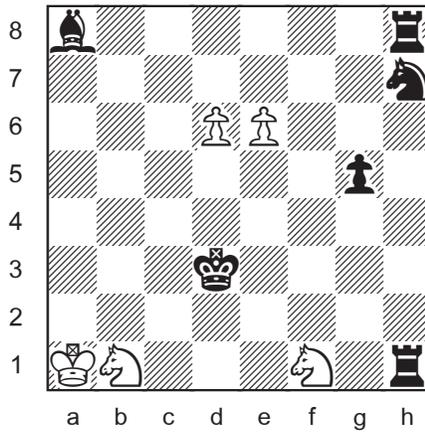
Not a unique solution. The first move could also be *1.Kb4*. There are many alternative routes along the way.

2.Ka5 3.Ka6 4.Kxa7 5.Kb6 6.Kc7 7.Kd7 8.Ke7 9.Kf7 10.Kg6 11.Kf5
12.Kg4 13.Kg3 14.Kf2 15.Ke1 16.Kd1 17.Kxc1

Eliminating the knight that prevented the king from getting to a1. Looking ahead, we can see that the pawn on g5 must eventually be captured to free f4. The pawn is guarded by the knight on h7 which is guarded by the rook on h8 which is guarded by bishop on a1. The knight on h7 is also guarded by the rook on h1 which is guarded by the bishop on a8. All of these pieces must be taken. Next target: the bishop on a1.



18.Kd1 19.Ke1 20.Kf2 21.Kg3 22.Kg4 23.Kf5 24.Kg6 25.Kf7 26.Ke7
27.Kd7 28.Kc7 29.Kb6 30.Ka5 31.Ka4 32.Ka3 33.Ka2 34.Kxa1

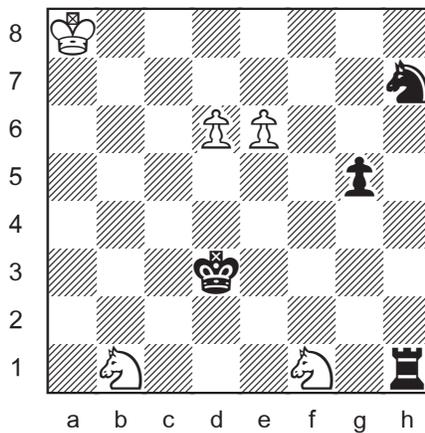


Halfway there. Now the rook on h8 is unprotected.

35.Ka2 36.Ka3 37.Ka4 38.Ka5 39.Kb6 40.Kc7 41.Kd7 42.Ke7 43.Kf7
44.Kg7 45.Kxh8

Undefending the bishop on a8.

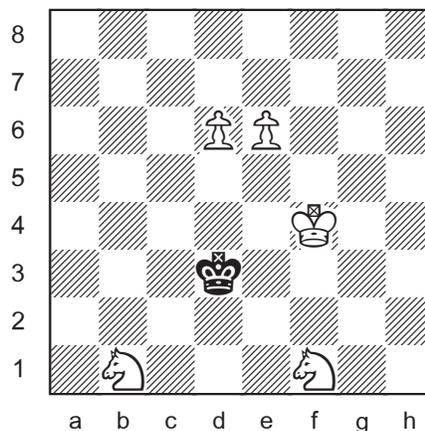
46.Kg8 47.Kf7 48.Ke8 49.Kd8 50.Kc8 51.Kb8 52.Kxa8



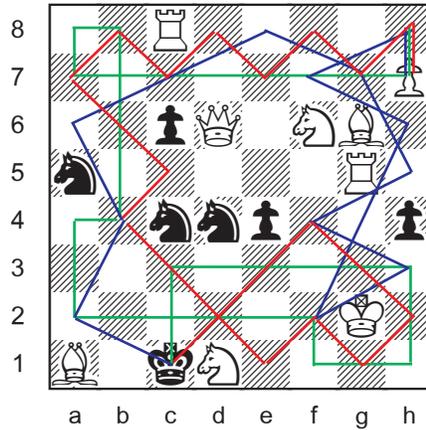
Three captures to go.

53.Kb7 54.Kc6 55.Kd5 56.Ke5 57.Kf5 58.Kg4 59.Kg3 60.Kg2
61.Kxh1 62.Kh2 63.Kh3 64.Kg4 65.Kh5 66.Kh6 67.Kxh7 68.Kg6
69.Kxg5 70.Kf4

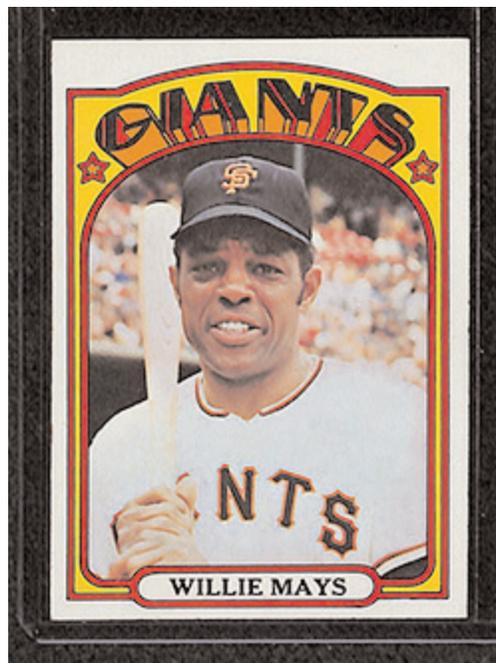
Made it!



Chess Maze 23

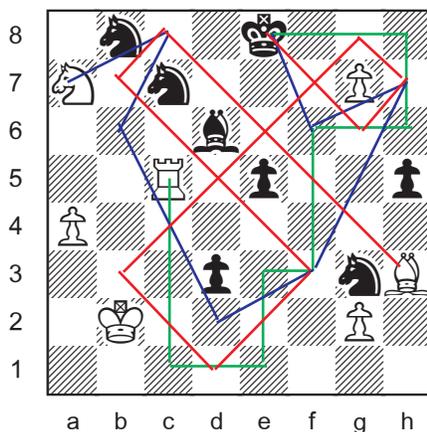


-  A rook goes high speed. 14 moves.
h8=R-h7-a7-a8-b8-b4-a4-a2-f2-f1-h1-h3-c3xc1
-  A knight is second fastest. 15 moves.
h8=N-f7-h6-g4-f2-h3-f4-h5-g7-e8-c7-a6-b4-a2xc1
-  A bishop is "slo-mo". 16 moves.
h8=B-g7-f8-e7-d8-c7-b8-a7-c5-b4-e1-f2-g1-h2-f4xc1
(A queen only needs 5 moves. h8=Q-h5-g4-f4xc1).



In San Francisco, May 24th is officially designated *Willie Mays Day*, commemorating his birth month and jersey number. It was also the date of his first major league game in 1951.

Chess Maze 24



The rook wins the race. 8 moves.
Rc5-c1-e1-e3-f3-f6-h6-h8xe8



The knight ties for second place. 9 moves.
Na7-c8-b6-c4-d2-f3-g5-h7-f6xe8



The bishop is equal second. 9 moves. Though it does travel a greater distance than the knight.
Bh3-c8-b7-f3-d1-b3-g8-h7-g6xe8



Safe at home.

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