

By the dogged method, count the number of chess positions with 2 kings and one pawn

Choose whether the pawn is black or white (factor of 2)

- I) a 2 corners of 40 places for the first pawn with no restriction on the opposing king
(63 places for the opposing king – 5 adjacent and 58 nonadjacent)
 - A) b 1 adjacent corner for opposing king
 - 1) c 60 places for the friendly king
 - B) b 2 adjacent edges for opposing king
 - 1) c 58 places for the friendly king
 - C) b 2 adjacent interior spots for opposing king
 - 1) c 55 places for the friendly king
 - (58 nonadjacent places for opposing king)
 - D) b 3 nonadjacent corners for opposing king
 - 1) c 59 places for the friendly king
 - E) b 21 nonadjacent edges for opposing king
 - 1) c 57 places for the friendly king
 - F) b 34 nonadjacent interior spots for opposing king
 - 1) c 54 places for the friendly king
- II) a 8 sides of 40 places
(63 places for the opposing king)
 - A) b 2 adjacent places on the side of the board
 - 1) c 58 places for the friendly king
 - B) b 3 adjacent places on the interior of the board
 - 1) c 55 places for the friendly king - (58 nonadjacent places)
 - C) b 4 nonadjacent corners
 - 1) c 59 places for the friendly king
 - D) b 21 nonadjacent sides
 - 1) c 57 places for the friendly king
 - E) b 33 nonadjacent interiors
 - 1) c 54 places for the friendly king
 - (30 middles of 40 places)(leaving 63 places for the opposing king)
- III) a 2 squares diagonally adjacent to the corner
 - A) b 1 adjacent place in the corner for the opposing king
 - 1) c 60 places for the friendly king
 - B) b 4 adjacent places on the an edge for the opposing king
 - 1) c 58 places for the friendly king
 - C) b 3 adjacent non-edge squares for the opposing king
 - 1) c 55 places for the friendly king
 - D) b 3 nonadjacent corners for the opposing king
 - 1) c 59 places for the friendly king
 - E) b 20 nonadjacent edges for the opposing king
 - 1) c 57 places for the friendly king
 - F) b 32 nonadjacent interior squares for the opposing king
 - 1) c 54 places for the friendly king
- IV) a 12 squares adjacent to an edge square and not on a corner (63 places for the opposing king)
 - A) b 3 adjacent edge squares for the opposing king
 - 1) c 58 places for the friendly king
 - B) b 5 adjacent interior squares for the opposing king

- 1) c 55 places for the friendly king
- C) b 4 nonadjacent corners for the opposing king
 - 1) c 59 places for the friendly king
- D) b 21 nonadjacent edge squares for the opposing king
 - 1) c 57 places for the friendly king
- E) b 30 nonadjacent interior squares for the opposing king
 - 1) c 54 places for the friendly king
- V) a 16 interior squares not adjacent to an edge square leaving 63 places for the opposing king
 - A) b 8 adjacent interior squares for the opposing king
 - 1) c 55 places for the friendly king
 - B) b 4 nonadjacent corners for the opposing king
 - 1) c 59 places for the friendly king
 - C) b 24 nonadjacent edges for the opposing king
 - 1) c 57 places for the friendly king
 - D) b 27 nonadjacent interior squares for the opposing king
 - 1) c 54 places for the friendly king
- VI) a 2 ends of 8 places on 2nd row for the first pawn that restrict the opposing king (62 places)
 - (4 adjacent places for the opposing king)
 - A) b 1 with opposite king in corner
 - 1) c 60 places for friendly king
 - B) b 2 with opposing king on edge
 - 1) c 58 places for friendly king
 - C) b 1 with opposing king in middle
 - 1) c 59 for friendly king
 - (3 corners, 21 edges, 34 middles of 58 nonadjacent places for the opposing king)
 - D) b 3 with king in corner
 - 1) c 59 for friendly king
 - E) b 21 with opposing king on edge
 - 1) c 57 for friendly king
 - F) b 34 with opposing king in middle
 - 1) c 54 for friendly king
- VII) a 2 middles adjacent to the end of 8 places on 2nd row for the first pawn that restrict the opposing king (61 places)
 - (6 adjacent places for the opposing king)
 - A) b 1 Opposing king in corner, 4 places blocked
 - 1) c 60 places for the friendly king
 - B) b 3 Opposing king on 2 spots on back rank, 1 on side, 6 places blocked
 - 1) c 58 places for the friendly king
 - C) b 2 Opposing king in front of or on inside of pawn, 9 places blocked
 - 1) c 55 places for the friendly king
 - (55 nonadjacent places – 3 corners, 32 middles, 20 sides for the opposing king)
 - D) b 3 corners for the opposing king
 - 1) c 59 places for the friendly king
 - E) b 20 sides for the opposing king
 - 1) c 57 places for the friendly king
 - F) b 32 middles for the opposing king
 - 1) c 54 places for the friendly king
- VIII) a 4 middles of 8 places on 2nd row for the first pawn that restrict the opposing king (61 places)

(6 adjacent places for the opposing king)

A) b 3 places on the back row for the opposing king

1) c 58 places for the friendly king

B) b 3 places not on the back row for the opposing king

1) c 55 places for the friendly king

(55 nonadjacent places – 4 corners, $18+3=21$ edges, 30 central squares)

C) b 4 corners for the opposing king

1) c 59 places for the friendly king

D) b 21 nonadjacent edges for the opposing king

1) c 57 places for the friendly king

E) b 30 central squares for the opposing king

1) c 54 places for the friendly king