Data Science Math Week 1 Assignment

Exercise 2.12

P(B or D) = P(B) + P(D) = 1/3 + 1/3 = 2/3

Exercise 2.14

The Venn diagram shows that there are 10 diamonds that are not face cards, 3 diamonds that ARE face cards, and 9 face cards that are not diamonds. It also shows that there are 30 additional cards. Therefore, the total number of cards is 30 + 10 + 3 + 9 = 52. The total number of face cards is 3 + 9 = 12. Therefore P(face card) = 12/52 = 3/13.

Exercise 2.28

P(white = 1 and red = 1 and blue = 1) = P(white = 1) x P(red = 1) x P(blue = 1)

= (1/6) x (1/6) x (1/6) = 1/216

Exercise 2.30

1. P(left-handed and left-handed) = P(left-handed) x P(left-handed)

= 0.09 x 0.09 = 0.0081

1. P(right-handed and right-handed) = P(right-handed) x P(right-handed)

= 0.91 x 0.91 = 0.8281

Optional challenge exercise

You could use the combn function.