Assignment 1

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Download all python codes from

https://github.com/pranav−159/ai1103_Probability_and_Random_variables/blob/main/Assignment_2/codes/experimental_verification_5.23.py

and latex-tikz codes from

https://github.com/pranav−159/ai1103_Probability_and_Random_variables/blob/main/Assignment_2/Assignment2_experimental_verification.tex

1 Problem(5.23)

A box contains 3 blue, 2 white, and 4 red marbles. If a marble is drawn at random from the box, what is the probability that it will be (i) white? (ii) blue? (iii) red?

2 Solution(5.23)

Let the random variable X={0,1,2} represent the marble being blue,white,red.
As box contain a total of 9 balls and picking any ball is equally likely using the definition of classical probability

$$\Pr(X = 0) = \frac{3}{9} \tag{2.0.1}$$

$$\Pr(X = 1) = \frac{2}{9} \tag{2.0.2}$$

$$\Pr(X = 2) = \frac{4}{9} \tag{2.0.3}$$