Assignment-2

AI1110 Probability And Random Variables
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10.15.1.10 A piggy bank contains hundred $50p$ coins, fifty ₹1 coins, twenty ₹2 coins and ten ₹5 coins. If it is equally likely that one of the coins will fall out when the bank is turned upside down, what is the probability that the coin

 (i) will be a $50p$ coin ?
(ii) will not be a ₹5 coin?

solution: Given:

$$\text{total number of coins} = 100 + 50 + 20 + 10$$
$$= 180 \qquad (1)$$

 (i) number of $50p$ coins $= 100$

$$\Pr(50p) = \frac{100}{180}$$
$$= \frac{5}{9} \qquad (2)$$

(ii) number of ₹5 coins $= 10$

$$\Pr(₹5) = \frac{180 - 10}{180}$$
$$= \frac{17}{18} \qquad (3)$$