

Statistics Assignment 5

② Probability that taken out marble is

definitely green = $\frac{1}{2}$

Probability that taken out marble is

probable green/blue = $\frac{1}{2}$

If taken out marble is definitely green,
probability of other marble to be green is

$\frac{1}{2}$.

If taken out marble is probable
green/blue, probability of other marble
to be green is 1.

Thus, total probability that the
remaining marble is green is

$$\frac{1}{2} \left(\frac{1}{2} \right) + \frac{1}{2} (1) = \frac{1}{4} + \frac{1}{2} = \frac{3}{4} \\ = \underline{\underline{0.75}}$$

① Having aloo roti for breakfast.

Event A

Aloo availability
at home

Event B

Atta
availability
at home

Event C

Having aloo
roti

Both aloo and atta are required to make and have aloo roti. Also, having aloo roti does not guarantee availability of either atta or aloo since aloo roti can be ordered from outside. However, if both aloo and atta are at home, aloo roti will be made at home and eaten.

Thus, having aloo roti, aloo availability and atta availability can be predicted together but not in pairs.