Combined Independent Events

(a) Jasmine throws a fair coin twice. Find the probability that it lands on heads both times.

(b) Arthur rolls a fair dice twice. Find the probability that he rolls a 6 both times.

(c) Lucy throws a fair coin once then rolls a fair dice one. Find the probability that the coin lands on tails and she rolls a 5 on the dice.

(d) Mo rolls a fair dice twice. Find the probability that it lands on an odd number both times.

(a) $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

(b) $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$

(c) $\frac{1}{2} \times \frac{1}{6} = \frac{1}{12}$

(d) $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

(a) The probability that a biased coin lands on heads is $\frac{2}{3}$. Fatima throws the coin twice. Find the probability that it lands on heads both times.

(b) The probability that a biased coin lands on tails is 0.75. Minahil throws the coin twice. Find the probability that it lands on heads on the first throw and tails on the second throw.

(a) $\frac{2}{3} \times \frac{2}{3} = \frac{4}{9}$

(b) $0.25 \times 0.75 = 0.1875$

(a) Oscar rolls a fair dice three times in a row. Find the probability that the dice lands on a 4 on all three rolls.

(b) The probability that a biased coin lands on heads is 0.6. Alex throws the biased coin three times. Find the probability that the coin lands on heads for the first two throws and tails for the third throw.

(a) $\frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} = \frac{1}{216}$

(b) $0.6 \times 0.6 \times 0.4$
$= 0.144$

(a) Dumi throws a biased coin twice. The probability that it lands on heads twice is $\frac{49}{100}$. Find the probability that it lands on heads if the coin is thrown once.

(b) Geraint throws a biased coin three times. The probability that it lands on heads all three times is $\frac{8}{125}$. Find the probability that it lands on tails all three times.

(a) $\frac{7}{10}$

(b) $P(H) = \frac{2}{5}$

$P(TTT) = \frac{3}{5} \times \frac{3}{5} \times \frac{3}{5} = \frac{27}{125}$