PROBABILITY 4: QUIZ SOLUTIONS

Question 1

In how many ways can six different coloured LED lights be arranged in four sockets?

A. 18 B. 180 C. 360 D. 720

Solution

$$N = 6 \times 5 \times 4 \times 3 = 360$$

So, the correct answer is C.

Question 2

How many 3-letter words can be formed using the letters A, B, C, D, E, without repetition?

A. 12 B. 30 C. 60 D. 120

Solution

$$N = 5 \times 4 \times 3 = 60$$

So, the correct answer is C.

Question 3

How many 5-digit numbers can be formed using the digits 1, 2, 3, 4, 5, without repetition?

A. 240 B. 120 C. 60 D. 30

Solution

$$N = 5 \times 4 \times 3 \times 2 \times 1 = 120$$

So, the correct answer is B.

Question 4

What is the value of $\frac{6!}{3!}$?

A. 2 B. 30 C. 60 D. 120

Solution

$$\frac{6!}{3!} = \frac{6 \times 5 \times 4 \times 3 \times 2 \times 1}{3 \times 2 \times 1} = 6 \times 5 \times 4 = 120$$

So, the correct answer is D.

Question 5

What is the value of $\frac{9!}{5!4!}$?

A. 504 B. 252 C. 126 D. 1

Solution

$$\frac{9!}{5!4!} = \frac{9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1}{5 \times 4 \times 3 \times 2 \times 1 \times 4 \times 3 \times 2 \times 1} = \frac{9 \times 8 \times 7 \times 6}{4 \times 3 \times 2 \times 1} = 126$$

So, the correct answer is C.