Assignment 1

The due date for submitting this assignment has passed.

Due on 2021-02-03, 23:59 IST.

As per our records you have not submitted this assignment.

1) Consider a fair coin with two sides having labels 6 and 8 respectively. Suppose we perform the experiment where we toss the coin 3 times and note down the outcome on the top face. The sample space $S$ for this experiment is given by

$S = \{666, 668, 686, 688, 866, 868, 886, 888\}$

$S = \{1\}$

$S = \{0, 1, 2, 3\}$

No, the answer is incorrect.

Accepted Answer:

$S = \{666, 668, 686, 688, 866, 868, 886, 888\}$

2) Consider a fair die with the faces labeled as $\{a, b, c, d, e, f\}$. Suppose we perform an experiment where we roll the die till it appears on the top face and note down the number of attempts to get it. The sample space $S$ for this experiment is given by

$S = \{a\}$

$S = \{0, 1, 2, 3, 4, 5, 6\}$

$S = \{1, 2, 3, 4, 5, 6, \ldots \}$

No, the answer is incorrect.

Score: 0

Accepted Answer:

$S = \{1, 2, 3, 4, 5, 6, \ldots \}$

3) Consider a fair die with the faces labeled as $\{1, 2, 3, 4, 5, 6\}$. Suppose we perform an experiment where we roll the die till 4 appears on the top face. The sample space $S$ for this experiment is given by

$S = \{4\}$

$S = \{1, 2, 3, 4, 5, 6, \ldots \}$

$S = \{1, 2, 3, 4, 5, 6\}$

No, the answer is incorrect.

Score: 0

Accepted Answer:

$S = \{1, 2, 3, 4, 5, 6\}$

4) Consider a fair coin with two sides having labels $a$ and $f$. Suppose we choose a number, $N$, from $\{1, 2, 3\}$ and then toss the coin $N$ times. Note if point $a$ appears on the top side in $N$ tosses. The sample space $S$ for this experiment is given by

$S = \{1, 1, \ldots , N\}$

$S = \{1, 2, 3\}$

$S = \{1, 2, 3, 4, 5, 6\}$

$S = \{1, 2, 3, 4, 5, 6, \ldots \}$

No, the answer is incorrect.

Score: 0

Accepted Answer:

$S = \{1, 2, 3\}$

5) Consider a bag with 100 blue balls and 200 green balls. We choose a ball at random from the bag and note down its colour. The sample space $S$ for this experiment is given by

$S = \{blue\text{ ball}, green\text{ ball}\}$

$S = \{1, 2, 3, \ldots , 200\}$

$S = \{1, 2, 3, \ldots , 300\}$

$S = \{1, 2, 3, \ldots , 300\}$

No, the answer is incorrect.

Score: 0

Accepted Answer:

$S = \{blue\text{ ball}, green\text{ ball}\}$

6) Consider a class of NPTEL students with the following names: Natasha, Sameha, Mohammmed, Ria, Tian, Joseph, Sineadstroman. We choose a student at random and note down the number of vowels in their names. The sample space $S$ for this experiment would be

$S = \{e, i, a, u, a\}$

$S = \{1, 2, 3, 4, 5\}$

$S = \{1, 2, 3, 4, 5, 6, 7\}$

No, the answer is incorrect.

Score: 0

Accepted Answer:

$S = \{1, 2, 3, 4, 5, 6, 7\}$

7) A pool-hockey tournament is played between 4 teams: South NPTEL, North NPTEL, West NPTEL, East NPTEL. The league tournament ends in a 4 way tie. The tournament decides to choose a team at random to determine the winner. The sample space $S$ for this experiment is given by

$S = \{1\}$

$S = \{1, 2, 3, 4\}$

$S = \{South NPTEL, North NPTEL, West NPTEL, East NPTEL\}$

No, the answer is incorrect.

Score: 0

Accepted Answer:

$S = \{South NPTEL, North NPTEL, West NPTEL, East NPTEL\}$