Assignment 4 (NCERT Class 9 Probability)

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***Abstract*—This document contains the solution to Example 1 of Chapter 15 (Probability) in the NCERT Class 9 Exemplar.**

Problem 1 (Example 1)**.** *A coin is tossed 1000 times with the following frequencies:*

Head: 455, Tail: 545.

Compute the probability for each event.

Solution: Let us denote the event of getting a head by E and getting a tail by F. Given,

1) The total number of trials, $N = 1000$.
2) The total number of occurrences of event E, $N_e = 455$.
3) The total number of occurrences of event F, $N_f = 545$.

$\therefore$

$$\Pr(E) = \frac{N_e}{N} = \frac{455}{1000} = 0.455 \tag{1}$$

$$\Pr(F) = \frac{N_f}{N} = \frac{545}{1000} = 0.545 \tag{2}$$

One can also verify that since these events are mutually exclusive and exhaustive, we get $\Pr(E) + \Pr(F) = 0.455 + 0.545 = 1$. The C code `./codes/4_1.c` computes and verifies the solution.