

ASSIGNMENT 7 : CBSE PROBABILITY CLASS- 12

EXERCISE - 13.4 QUESTION - 3

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Outline

1 Question

2 Solution

Question

Let X represent the difference between the number of heads and the number of tails obtained when a coin is tossed 6 times. What are possible values of X ?

Solution

Let **H** represent heads and **T** represents tails for the given 6 throws then,
All the possible combinations for the given condition are :

$$6H + 0T \quad (1)$$

$$5H + 1T \quad (2)$$

$$4H + 2T \quad (3)$$

$$3H + 3T \quad (4)$$

$$2H + 4T \quad (5)$$

$$1H + 5T \quad (6)$$

$$0H + 6T \quad (7)$$

Solution

Eq Number	Difference
(1)	6
(2)	4
(3)	2
(4)	0
(5)	2
(6)	4
(7)	6

Table 1: Difference of Heads and Tails

From 1 all the possible differences between the number of heads and the number of tails obtained are 0 or 2 Or 4 Or 6.

\therefore The possible values of $\mathbf{X} = \{0, 2, 4, 6\}$