99. Dice Throw Problem

PROGRAM:-

```
def dice_throw(n, m, X):
    # Initialize dp table with zeros
    dp = [[0] * (X + 1) for _ in range(n + 1)]

    # Base case
    dp[0][0] = 1

    # Fill the dp table
    for i in range(1, n + 1):
        for j in range(1, X + 1):
            dp[i][j] = 0
            for k in range(1, m + 1):
                if j - k >= 0:
                    dp[i][j] += dp[i - 1][j - k]

    return dp[n][X]

# Example usage:
n = 3  # number of dice
m = 6  # number of faces
X = 8  # target sum
print(f"The number of ways to get sum {X} with {n} dice each having {m} faces is {dice_throw(n, m, X)}")
```

OUTPUT:-

```
The number of ways to get sum 8 with 3 dice each having 6 faces is 21

=== Code Execution Successful ===
```

TIME COMPLEXITY:-O(n*x*m)