

HATFD1035

Print Pascal's Triangle

Write a program to generate and print the first n rows of Pascal's triangle without using built-in math or

array functions. For n = 5, the output should be:

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

**Solution:**

**C Program**

```
#include <stdio.h>
```

```
void Pascaltriangle(int a) {
```

```
    for (int row = 1; row <= a; row++) {
```

```
        for (int j = 0; j <= a - row; j++) {
```

```
            printf(" ");
```

```
        }
```

```
        int Num = 1;
```

```
        for (int i = 1; i <= row; i++) {
```

```
            printf("%d ", Num);
```

```
            Num = Num * (row - i) / i;
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
}
```

```
int main() {
```

```
    int a;
```

```
printf("Enter no of triangle: ");  
  
scanf("%d", &a);  
  
Pascaltriangle(a);  
  
return 0;  
  
}
```

**Sample input 1 :**

**Enter no of triangle: 7**

```
1  
1 1  
1 2 1  
1 3 3 1  
1 4 6 4 1  
1 5 10 10 5 1  
1 6 15 20 15 6 1
```

**Sample input 2:**

**Enter no of triangle: 8**

```
1  
1 1  
1 2 1  
1 3 3 1  
1 4 6 4 1  
1 5 10 10 5 1  
1 6 15 20 15 6 1  
1 7 21 35 35 21 7 1
```

**Sample input 3: Enter no of triangle: 6**

**1**

**1 1**

**1 2 1**

**1 3 3 1**

**1 4 6 4 1**

**1 5 10 10 5 1**