```
(venv) MacBook-Air:Module6 edwardnardo$ python catalan.py
Order 2 Catalan number = 2
Order 3 Catalan number = 5
Order 4 Catalan number = 14
Order 5 Catalan number = 42
Order 6 Catalan number = 132
Order 7 Catalan number = 429
Order 8 Catalan number = 1430
Order 9 Catalan number = 4862
Order 10 Catalan number = 16796
Order 11 Catalan number = 58786
Order 12 Catalan number = 208012
Order 13 Catalan number = 742900
Order 14 Catalan number = 2674440
Order 15 Catalan number = 9694845
(venv) MacBook-Air:Module6 edwardnardo$
```

```
(venv) MacBook-Air:Module6 edwardnardo$ python pascal.py
[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]
[1, 8, 28, 56, 70, 56, 28, 8, 1]
[1, 9, 36, 84, 126, 126, 84, 36, 9, 1]
(venv) MacBook-Air:Module6 edwardnardo$
```

pascal (4,0) → K=0 → base case → return 1

pascal (4,1) → pascal (3,0) + pascal (3,1)

↳ 1

pascal (2,0) + pascal (2,1)

↳ 1

pascal (1,0) + pascal (1,1)

↳ 1 ↳ 1 = 4

pascal (4,2) → pascal (3,1) + pascal (3,2)

pascal (2,0) + pascal (2,1)

↳ 1

pascal (1,0) + pascal (1,1)

↳ 1 ↳ 1

pascal (2,1) + pascal (2,2) → 1

↳ pascal (1,0) + pascal (1,1)

↳ 1 ↳ 1

= 6

pascal (4,3) = pascal (3,2) + pascal (2,2) → 1

pascal (2,1) + pascal (2,2) → 1

pascal (1,0) + pascal (1,1) → 1

↳ 1

= 4

pascal (4,4) = base case n = k → return 1

∴ [1, 4, 6, 4, 1]