

```

90 print("-"*30)
91 arr = np.arange(1, 13)
92 print("Original:", arr)
93 reshaped = arr.reshape(3, 4) # 3 rows, 4 columns
94 print("Reshaped 3x4: \n", reshaped)
95
96 # Flatten back
97 flattened = reshaped.flatten()
98 print("Flattened:", flattened)
99 print("="*50)
100
101 # 6. Mathematical & Statistical Functions
102 print("6. Math & Stats Functions")
103 print("-"*30)
104 data = np.array([12, 15, 18, 22, 30, 35])
105 print("Data:", data)
106 print("Mean:", np.mean(data))
107 print("Median:", np.median(data))
108 print("Standard Dev:", np.std(data))
109 print("Variance:", np.var(data))
110 print("Min:", np.min(data))
111 print("Max:", np.max(data))
112 print("Sum:", np.sum(data))
113 print("Cumulative Sum :", np.cumsum(data))
114 print("="*50)

```

Output:

```

1 NumPy Version: <module 'numpy.version' from
  ↳ '/tmp/.venv/lib64/python3.14/site-packages/numpy/version.py'>
2 =====
3 1. Creating Arrays
4 -----
5 From list: [1 2 3 4 5]
6 Type: <class 'numpy.ndarray'>
7 Data type: int64
8
9 2D Array:
10 [[1 2 3]
11   [4 5 6]]
12
13 Zeros: [0. 0. 0. 0. 0.]
14 Ones (3x4) :
15 [[1. 1. 1. 1.]
16   [1. 1. 1. 1.]
17   [1. 1. 1. 1.]]
18 arange(0,20,2) : [ 0  2  4  6  8 10 12 14 16 18]
19 linspace(0,1,5) : [0.  0.25 0.5  0.75 1.  ]
20
21 Random Arrays:

```