

```

22 Random (0-1) : [0.50083525 0.09400569 0.44989897 0.74831388 0.57466536]
23 Random integers : [10 69 1 65 17 9]
24 =====
25 2. Array Attributes
26 -----
27 Shape: (2, 3)
28 Size (elements): 6
29 Dimensions: 2
30 Item size (bytes): 8
31 Data type: int64
32 =====
33 3. Basic Operations (Element-wise)
34 -----
35 a: [10 20 30 40]
36 b: [1 2 3 4]
37 a + b: [11 22 33 44]
38 a - b: [ 9 18 27 36]
39 a * b: [ 10 40 90 160]
40 a / b: [10. 10. 10. 10.]
41 a ** 2: [ 100 400 900 1600]
42 sin(a): [-0.54402111 0.91294525 -0.98803162 0.74511316]
43 sqrt(a): [3.16227766 4.47213595 5.47722558 6.32455532]
44 =====
45 4. Indexing and Slicing
46 -----
47 arr: [10 20 30 40 50 60]
48 First element : 10
49 Last element : 60
50 Slice [1:4] : [20 30 40]
51 Every 2nd: [10 30 50]
52 Reverse: [60 50 40 30 20 10]
53
54 2D Matrix:
55 [[1 2 3]
56 [4 5 6]
57 [7 8 9]]
58 Element [1,2] : 6
59 First row: [1 2 3]
60 First column: [1 4 7]
61 Submatrix 2x2:
62 [[1 2]
63 [4 5]]
64 =====
65 5. Reshaping
66 -----
67 Original: [ 1 2 3 4 5 6 7 8 9 10 11 12]
68 Reshaped 3x4:
69 [[ 1 2 3 4]

```