

Sure, here are some simple exercises related to the `numpy` package, along with the answers:

****Exercise 1:**** Import the numpy package as np.

```
```python
import numpy as np
```
```

****Exercise 2:**** Create a numpy array of integers from 0 to 9.

```
```python
arr = np.arange(10)
print(arr)
```
```

****Exercise 3:**** Create a 3x3 numpy array of all True's.

```
```python
arr = np.full((3,3), True, dtype=bool)
print(arr)
```
```

****Exercise 4:**** Extract all odd numbers from a 1D numpy array.

```
```python
arr = np.array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])
arr = arr[arr % 2 == 1]
print(arr)
```
```

****Exercise 5:**** Replace all odd numbers in a 1D numpy array with -1.

```
```python
arr = np.array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])
arr[arr % 2 == 1] = -1
print(arr)
```
```

****Exercise 6:**** Convert a 1D array to a 2D array with 2 rows.

```
```python
arr = np.arange(10)
arr = arr.reshape(2, -1)
print(arr)
```
```

****Exercise 7:**** Compute the mean, median, and standard deviation of a 1D array.

```
```python
arr = np.array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10])
mean = np.mean(arr)
median = np.median(arr)
std_dev = np.std(arr)
print("Mean: ", mean)
print("Median: ", median)
print("Standard deviation: ", std_dev)
```
```

****Exercise 8:**** Normalize a 5x5 random matrix (Subtract mean and divide by standard deviation).

```
```python
arr = np.random.rand(5, 5)
mean = arr.mean()
std_dev = arr.std()
arr = (arr - mean) / std_dev
print(arr)
```
```

****Exercise 9:**** Multiply a 5x3 matrix by a 3x2 matrix (real matrix product).

```
```python
arr1 = np.random.rand(5, 3)
arr2 = np.random.rand(3, 2)
result = np.dot(arr1, arr2)
print(result)
```
```

****Exercise 10:**** Find the unique values and the count of unique values in a numpy array.

```
```python
arr = np.array([1, 2, 2, 5, 7, 4, 5, 7, 8, 1, 1, 1, 2, 2, 2, 5, 8])
unique, counts = np.unique(arr, return_counts=True)
print("Unique Values:", unique)
print("Counts:", counts)
```
```