Write a NumPy program to create an array of 10 zeros, 10 ones, and 10 fives

```
import numpy as np

# Create arrays
zeros_array = np.zeros(10)
ones_array = np.ones(10)
fives_array = np.full(10, 5)  # Creates an array of 10 fives

# Concatenate the arrays
result_array = np.concatenate((zeros_array, ones_array, fives_array))

# Print the result
print(result_array)
```

```
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 5. 5. 5. 5.
 5. 5. 5. 5. 5. 5.]
```

2. Write a NumPy program to create a 3x3 matrix with values ranging from 2 to 10.

```
import numpy as np

# Create an array with values from 2 to 10
values = np.arange(2, 11)  # This creates an array [2, 3, 4, 5, 6, 7, 8, 9, 10]

# Reshape it into a 3x3 matrix
matrix_3x3 = values.reshape(3, 3)

# Print the result
print(matrix_3x3)
```

```
[[ 2  3  4]
 [ 5  6  7]
 [ 8  9 10]]
```

3. Write a NumPy program to create an array with values ranging from 12 to 38.

```
import numpy as np

# Create an array with values from 12 to 38
array_range = np.arange(12, 39)  # Note that 39 is exclusive

# Print the result
print(array_range)
```

```
[12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
 36 37 38]
```

Write a NumPy program to convert a list and tuple into arrays. Input: my_list = [1, 2, 3, 4, 5, 6, 7, 8]

```
import numpy as np

# Input list and tuple
my_list = [1, 2, 3, 4, 5, 6, 7, 8]
my_tuple = (9, 10, 11, 12)

# Convert list and tuple to arrays
array_from_list = np.array(my_list)
array_from_tuple = np.array(my_tuple)

# Print the results
print("Array from list:", array_from_list)
print("Array from tuple:", array_from_tuple)
```

```
Array from list: [1 2 3 4 5 6 7 8]
Array from tuple: [ 9 10 11 12]
```