

ASSIGNMENT-1

1. To calculate area of a rectangle:

```
length = 10 width =
```

```
5 area = length *
```

```
width print("Area
```

```
=", area)
```

2. To convert miles to km: `miles = 10 km = miles * 1.60934 print(miles, "miles is", km, "km")`

3. To check palindrome: `def is_palindrome(s): return s == s[::-1] s = "radar" print(is_palindrome(s))`

4. To find second largest element:

```
list1 = [5, 2, 8, 3, 10] list1.sort()
```

```
print("Second largest:", list1[-
```

```
2])
```

5. Indentation refers to the spaces at the beginning of a code line. It is used to define blocks of code

6. Set difference:

```
A = {1, 2, 3, 4} B =
```

```
{3, 4, 5} print(A -
```

```
B) # {1, 2}
```

7. Print 1 to 10:

```
i = 1 while i
```

```
<= 10:
```

```
    print(i)
```

```
    i += 1
```

8. Factorial using while loop:

```
num = 5
```

```
factorial = 1 while num > 1:
```

```
    factorial *= num    num -= 1
```

```
print("Factorial:", factorial) 9.
```

Check positive/negative/zero:

```
num = -5 if num
> 0:
print("Positive")
elif num == 0:
print("Zero")
else:
    print("Negative")
```

10. Largest of

```
three: a, b, c = 10,
15, 12 if a > b and a
> c: print("a is
largest") elif b > a
and b > c: print("b
is largest") else:
    print("c is largest")
```

11. Array of ones: import

```
numpy as np arr =
np.ones((2, 3))
print(arr)
```

12. 2D random integers:

```
import numpy as np arr
= np.random.randint(0,
10, size=(3, 3))
print(arr)
```

13. linspace:

```
import numpy as np arr =
np.linspace(1, 10, 5)
print(arr)
```

14. linspace 1 to 100:

```
import numpy as np  
arr = np.linspace(1, 100,  
10)  
print(arr)
```

15. Even numbers 2 to 20:

```
import numpy as np  
arr = np.arange(2, 21, 2)  
print(arr)
```

16. 1 to 10 step 0.5: import

```
numpy as np  
arr = np.arange(1, 10.5, 0.5)  
print(arr)
```

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