



```
1 Task 1:
2
3 from math import pow
4
5 """
6 @doc Summation of series
7 @assignment #1
8 @author TahsinAyman
9 @param n: <class:int>
10 """
11 def main(n: int):
12     sum = 0
13     for i in range(1, n + 1):
14         sum += pow(i, 2)
15     return sum
16
17 if __name__ == "__main__":
18     n = int(input("Enter a number: "))
19     print(f"Summation of series: {main(n)}")
20
```

21 Output:

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22
23 Enter a number: 5
24 Summation of series: 55
25
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27
28 Task 2:
29
30 """
31 @doc Summation of series
32 @assignment #2
33 @author TahsinAyman
34 @param n: <class:int>
35 """
36 def main(n: int):
37     sum = 1
38     for i in range(3, n + 1, 3):
39         sum += 1 / i
40     return sum
41
42 if __name__ == "__main__":
43     n = int(input("Enter a number: "))
44     print(f"Summation of series: {main(n)}")
45
```

46 Output:

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47
48 Enter a number: 12
49 Summation of series: 1.6943333333333333
50
51
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```



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1 Task 3:
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3 """
4 @doc Area of a Rectangle
5 @assignment #3
6 @author TahsinAyman
7 @param width: <class:int>, height: <class:int>
8 """
9 def main(width: int, height: int):
10     return width * height
11
12 if __name__ == "__main__":
13     width, height = tuple(map(lambda i: int(i), input("Enter width and height: ").strip().split()))
14     print(f"Area of the rectangle is: {main(width, height)}")
15
```

16 Output:

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17
18 Enter width and height: 5 6
19 Area of the rectangle is: 30
20
```

21 -----

22 Task 4:

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24
25 from math import pi, pow
26
27 """
28 @doc Area of a Circle
29 @assignment #4
30 @author TahsinAyman
31 @param radius: <class:int>
32 """
33 def main(radius: int):
34     return pi * pow(radius, 2)
35
36 if __name__ == "__main__":
37     r = int(input("Enter the radius: "))
38     print(f"Area of the circle is: {main(r)}")
39
```

40 Output:

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41
42 Enter the radius: 5
43 Area of the circle is: 78.53981633974483
44
```

45 -----

46 Task 5:

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48
49 from math import pow
50
51 """
52 @doc Area of a square
53 @assignment #5
54 @author TahsinAyman
55 @param length: <class:int>
56 """
57 def main(length: int):
58     return pow(length, 2)
59
60 if __name__ == "__main__":
61     l = int(input("Enter the length: "))
62     print(f"Area of the square is: {main(l)}")
63
```

64 Output:

```
65
66 Enter the length: 5
67 Area of the square is: 25
```