

Assignment 14 - Functions

(TSRS: Takes Something Returns Something / TSRN: Takes Something Returns Nothing)

1. Write a function to calculate the area of a circle. (TSRS)
2. Write a function to calculate simple interest. (TSRS)
3. Write a function to check whether a given number is even or odd. Return 1 if the number is even, otherwise return 0. (TSRS)
4. Write a function to print the first N natural numbers. (TSRN)
5. Write a function to print the first N odd natural numbers. (TSRN)
6. Write a function to calculate the factorial of a number. (TSRS)
7. Write a function to calculate the number of combinations one can make from n items and r selected at a time. (TSRS)
Formula: $nCr = n! / (r! * (n - r)!)$
8. Write a function to calculate the number of arrangements one can make from n items and r selected at a time. (TSRS)
Formula: $nPr = n! / (n - r)!$
9. Write a function to check whether a given number contains a given digit or not. (TSRS)
10. Write a function to print all prime factors of a given number.
For example, if the number is 36, the output should be: 2, 2, 3, 3. (TSRN)