

MATH 4332

Assignment# 2

Due : 09/08/2023, Friday, before 11:59pm

Term :Fall 2023

-
1. Write a program that asks the user for a number of seconds and prints out how many minutes and seconds that is. For instance, 200 seconds is 3 minutes and 20 seconds. [Hint: Use the `//` operator to get minutes and the `%` operator to get seconds.]
 2. (a) Write a program that asks the user for a number and prints out the factorial of that number.
[Hint: Use the `math` module.]
(b) Write a program that asks the user to enter an angle in degrees and prints out the sine of that angle.
[Hint: Use the `math` module.]
 3. Ask the user for a temperature. Then ask them what units, Celsius (use 0 for Celsius) or Fahrenheit (use 1 for Fahrenheit). Your program should convert the temperature to the other unit. The conversions are $F = \frac{9}{5}C + 32$ and $C = \frac{5}{9}(F - 32)$.
 4. Write a program that asks the user how many credits they have taken. If they have taken 23 or less, print that the student is a freshman. If they have taken between 24 and 53, print that they are a sophomore. The range for juniors is 54 to 83, and for seniors it is 84 and over.
 5. A year is a leap year if it is divisible by 4, except that years divisible by 100 are not leap years unless they are also divisible by 400. Write a program that asks the user for a year and prints out whether it is a leap year or not.