(a) If a five-digit number is input through the keyboard, write a program to calculate the sum of its digits. (Hint: Use the modulus operator '%')

(b) If a five-digit number is input through the keyboard, write a program to reverse the number.

(c) If lengths of three sides of a triangle are input through the keyboard, write a program to find the area of the triangle.

(d) Write a program to receive Cartesian co-ordinates (x, y) of a point and convert them into polar co-ordinates (r, φ).

Hint: $r = \text{sqrt}(x^2 + y^2)$ and $\varphi = \tan^{-1}(y / x)$

(e) Write a program to receive values of latitude (L1, L2) and longitude (G1, G2), in degrees, of two places on the earth and output the distance (D) between them in nautical miles. The formula for distance in nautical miles is:

$$D = 3963 \cos^{-1}(\sin L1 \sin L2 + \cos L1 \cos L2 * \cos(G2 - G1))$$

(f) Wind chill factor is the felt air temperature on exposed skin due to wind. The wind chill temperature is always lower than the air temperature, and is calculated as per the following formula:

$$wcf = 35.74 + 0.6215t + (0.4275t - 35.75) * v^{0.16}$$

where t is the temperature and v is the wind velocity. Write a program to receive values of t and v and calculate wind chill factor (wcf).

(g) If value of an angle is input through the keyboard, write a program to print all its Trigonometric ratios.

(h) Two numbers are input through the keyboard into two locations C and D. Write a program to interchange the contents of C and D.

(i) Consider a currency system in which there are notes of seven denominations, namely, Re. 1, Rs. 2, Rs. 5, Rs. 10, Rs. 50, Rs. 100. If a sum of Rs. N is entered through the keyboard, write a program to compute the smallest number of notes that will combine to give Rs. N.