1. Write a program to print a table of cosines. The first column of the table should contain angle in degrees from 0 to 180 at an interval of 20 and the second column should have corresponding cosine values (3 decimal places). (cosines.c)

2. Suppose in a class there are some students (we dont know the number of students in advance). In an examination, a student with roll no i got m_i marks. Find the average $\bar{m}$ and standard deviation σ. The list of marks m_i is entered with -1 as the last input. The last input only indicates that the list is complete and is not a mark. (average.c)

3. Write two programs that calculates the value of $tan(x)$ if $0 \leq x < \pi/4$, and prints an error message otherwise. Value of tan(x) is to be calculated by summing a series

   (a) up to the first n terms (tan1.c)

   (b) such that the remainder is less than some $\epsilon > 0$ (tan2.c)

4. Given an integer, write a program to reverse and print it. For example, if the given number is 12386 the number printed should be 68321. (reverse.c)

5. Given an octal number (a number with base 8), write a program (convert.c) to find the decimal equivalent. For example, octal number 2673 is

$$2 \times 8^3 + 6 \times 8^2 + 7 \times 8^1 + 3 \times 8^1 = 1467$$