Assignment Set 6[Floating Point operations]

Batch A & B

1. Write a program to read two floating point numbers and to print its sum, difference and product.
2. Write a program to calculate the perimeter of a circle, it should accept the radius from the user.
3. Write a program to calculate the roots of a quadratic equation.
4. Write a program to sort an array of floating point numbers.
5. Compute the sin series below

   COS X = 1-x^2/2!+x^4/4!-x^6/6!+..... n terms

   Calculate Cos(X) by processor instruction and compare the result with the above one.
6. Compute the Taylor series for the exponential function e^x at a = 0 is

$$1+\frac{x^1}{1!}+\frac{x^2}{2!}+\frac{x^3}{3!}+\frac{x^4}{4!}+\frac{x^5}{5!}+\cdots = 1+x+\frac{x^2}{2}+\frac{x^3}{6}+\frac{x^4}{24}+\frac{x^5}{120}+\cdots = \sum_{n=0}^{\infty}\frac{x^n}{n!}.$$

7. Compute $f(x) = x^3+x^2-5x+9$ for floating point x values