1. (15 points) Complete codes
   A. Create the inline function of $\frac{d}{dx}(x^2 - 5)$

   x=sym('x'); ss='x.^2-25';
   B. Create the inline function of $\frac{d}{dx}(x^3 - 47)$

   x=sym('x'); ss='x.^3-47';
   C. Create the inline function of $\frac{d}{dx}(2^{x^2} - 10x + 1)$

   x=sym('x'); ss='2.^x.^2-10*x+1';

2. (10 points) Give the updating equation of the Newton's method for approaching zeros iteratively.
3. (15 points) Draw a flow chart to illustrate zero finding of an arbitrary function by the Newton's method.
4. (15 points) Write a matlab function to implement flow chart 3, where the input is a string that specifies a given function.
5. (15 points) Write codes to call function in problem 4 for solving
   A. $\sqrt{5}$
   B. $\sqrt[3]{47}$
   C. zero of f(x)= $2^{x^2} - 10x + 1$
6. ( 10 points) Write codes to call function in problem 4 for solving minimizing f(x)=(x-tanh(2*x+10)).^2
7. (20 points) Check codes of problem 5A, 5B, 5C and 6