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QFGB 8928 Auto Trading System

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Problem 1.

Code:

```
function y=question1(x)
y = sin(1+x^(3/4)+log(x));

>> question1(100)

ans =

    -0.4539
```

Problem 2.

Code:

```
function y=question2(x)
if x>= 0
    y = (1+x)^4;
else
    y = exp(sin(x));
end
>> question2(100)

ans =

    104060401

>> question2(-100)

ans =

    1.6592
```

Problem 3.

Code:

```
function y = question3(x)
if x>=0
    y = (1+x)^4
elseif -10<x<0
    y = exp(sin(x))

else
    (x^2+1)^0.5

end
>> question3(100)

y =

   104060401


ans =

   104060401

>> question3(-5)

ans =

    5.0990


>> question3(-100)

ans =

   100.0050
```

Problem 4.

Code:

```
x = 1:500
s = 0
for i=1:length(x)
    s = s+x(i)
    ymean = s/length(x)
end
```

```
s =

      125250


ymean =

   250.5000
```

Problem 5.

Code:

```
function [sum]= question5()
    function y = cal(x)
        y = (sin(x) + x) *(1/x^2);
    end
sum = 0;
k = 1;
    while cal(k)>10^(-5)
    sum = sum+cal(k);
    k = k+1;
    end
end
```

```
>> question5

ans =

    13.1041
```