Problem 1.

How much time does one cycle (period) of a 10 Hz sine wave take?

1/10th second

How much time does six cycles of a 10 Hz sine wave take?

3/5th seconds

What does this command do in MATLAB? >> t = 0:0.001:0.6

creates a vector of the numbers from 0 to 0.6 by intervals of .001

What does this command do in MATLAB? >> y = 3*sin(2*pi*10*t)

Calculates a y value of the function with the given t value.

What does this command do in MATLAB? >> plot(t,y)

plots the data with t as the x axis.

Execute the following statements and explain why the plot doesn't look like a sine wave:

```
>> t = 0:0.02:0.6
>> y = 3*sin(2*pi*10*t)
>> plot(t,y)
```

Because the values of t are too far apart and there are too few points.

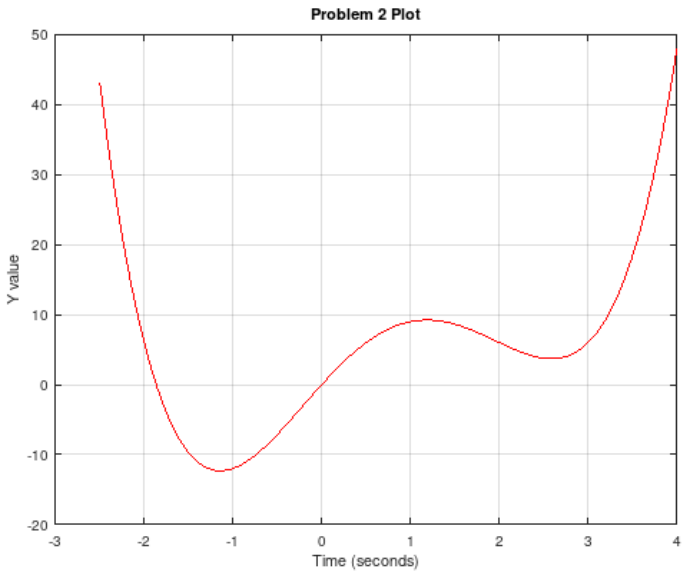
Execute the following statements and explain why the plot doesn't look like a sine wave:

```
>> t = 0:0.001:100;
>> y = 3*sin(2*pi*10*t);
>> plot(t,y);
```

Because there are wayyy too many points and its entirely covered with lines.

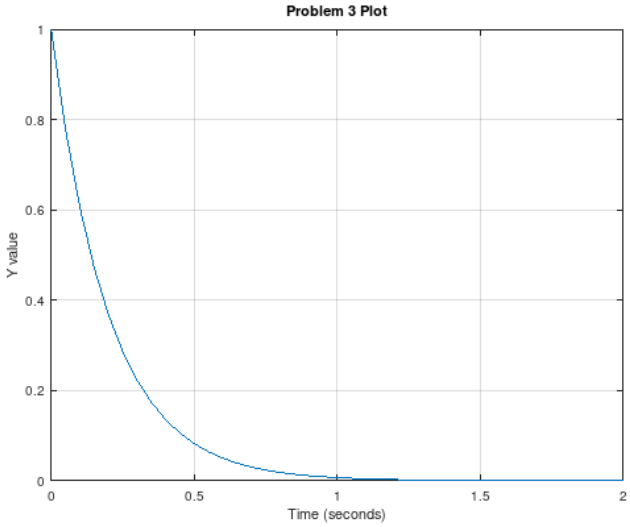
Problem 2.

Plot the polynomial $f(t) = t\,4 - 3.5t\,3 - 2.5t\,2 + 14t - 6$ from t = 2.5 to 4.

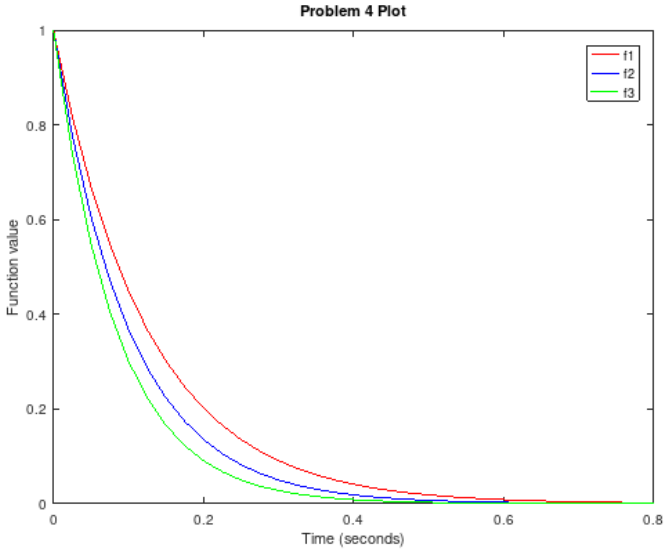


Estimated Roots: at x= -1.8, 0

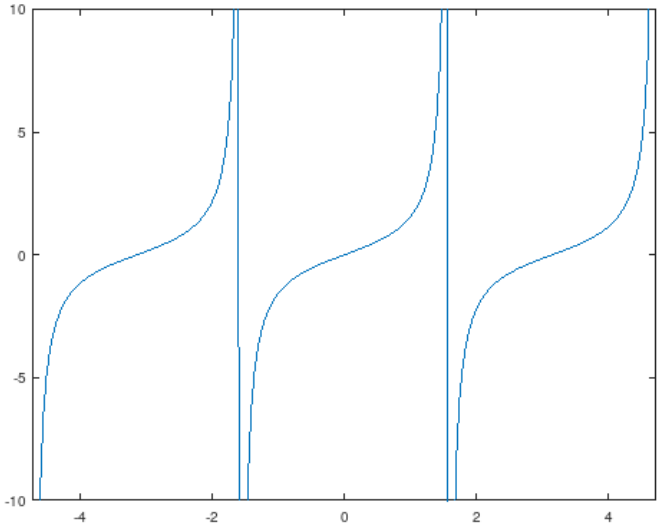
Problem 3.



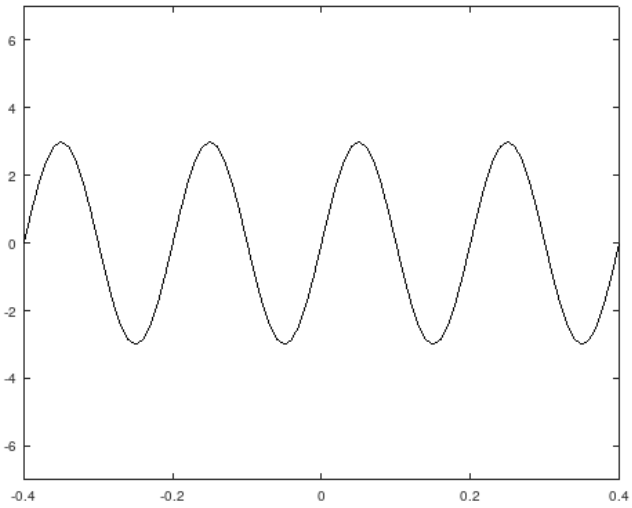
Problem 4.

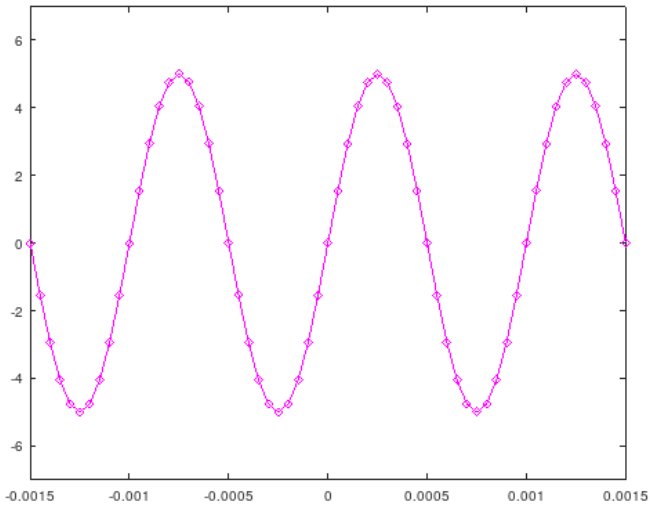


Problem 5.



Problem 6.





Not sure if I did this right…

Question: Wasn't it mentioned that markers are typically only placed upon graphs of measured data not calculated data?