Problem 1 of Review Questions

```
amt = input('Enter the Income: ');

if (amt > 60000)
    tax = (25/100)*30000+(30/100)*30000+(40/100)*(amt-60000);
elseif (amt > 30000)
    tax = (25/100)*30000+(30/100)*(amt-30000);
else
    tax = (25/100)*(amt);
end

fprintf('The tax to be paid for an income of %d is %d',amt,tax);
```

Problem 2 of Review Questions

```
x = input('Enter the first number: ');
y = input('Enter the second number: ');
z = input('Enter the third number: ');

if (x > y)
    if (x > z)
        fprintf('The maximum of numbers %d, %d, %d is %d',x,y,z,x);
    else
        fprintf('The maximum of numbers %d, %d, %d is %d',x,y,z,z);
    end
else
    if (y > z)
        fprintf('The maximum of numbers %d, %d, %d is %d',x,y,z,y);
    else
        fprintf('The maximum of numbers %d, %d, %d is %d',x,y,z,z);
    end
end
```

Problem 3 of Review Questions

```
% Declare sum,count and set max, min to the first value entered.
sum = 0.0;
count = 0;
num = input('Enter a number(-ve value to terminate): ');
max = num;
min = num;

while( num >= 0 )
        if (num > max)
            max = num;
        end

        if (num < min)
            min = num;
        end
    count = count+1;
    sum = sum+num;
    num = input('Enter another: ');
end

if (count == 0)
    fprintf('The sequence cannot start with a negative value');
else
    mean = sum/(count);
    fprintf('statistics of the %d numbers are\n',count);
    fprintf('sum = %f\nmean = %f\nmaximum = %f\nminimum = %f', ...
            sum,mean,max,min);
end
```

Problem 4 of Review Questions

```
% Assume variables nBig and nSm are given

% Outer loop to iterate from nBig to nSm
while ( nBig >= nSm )

    % Check nBig to see if it is prime
      d=2;  % divisor
      % Iterate until first proper divisor is found
      while (mod(nBig,d) ~= 0);
          d = d + 1;
      end
      if (d == nBig)
          fprintf('%d is a prime\n',nBig);
      else
          fprintf('%d\n',nBig);
      end

    nBig = nBig - 1;
end
```

Problem 5 of Review Questions

```
% Vector dep and scalar bal are assumed to be given!

len = length(dep);
count = 1;
Max_Amt = 1000;
daily_bal(1) = bal + dep(1);

fprintf('Day %d balance %f\n', count, daily_bal(count));
% Update daily_bal until either all the deposits are added
% or the max_amt reaches a set value.
while((count < len) & (daily_bal(count) < Max_Amt))
    count = count+1;
    daily_bal(count) = daily_bal(count-1) + dep(count);
    fprintf('Day %d balance %f\n', count, daily_bal(count));
end
```

Problem 6 of Review Questions

```
% v assumed to be given

cumulative_prod(1) = v(1);

i = 2;
while ( i <= length(v) )
    cumulative_prod(i)=cumulative_prod(i-1)*v(i);
    i = i + 1;
end
```

Problem 7 of Review Questions

```
% ptA, ptB,ptC are assumed to be given

perimeter = sqrt(sum((ptA-ptB).^2)) + sqrt(sum((ptB-ptC).^2))...
            + sqrt(sum((ptC-ptA).^2));
fprintf('The perimter of the triangle is %f',perimeter);


% Below is an alternate solution:
%
%perimeter = sqrt( (ptA(1)-ptB(1))^2 + (ptA(2)-ptB(2))^2 );
%perimeter = perimeter + sqrt( (ptB(1)-ptC(1))^2 + (ptB(2)-ptC(2))^2 );
%perimeter = perimeter + sqrt( (ptC(1)-ptA(1))^2 + (ptC(2)-ptA(2))^2 );
%fprintf('The perimter of the triangle is %f',perimeter);
```