To pass the test you must answer correctly to at least 8 of the following 10 questions.
Time: 30 minutes.

Name:_____

1. Consider the following table

```
stockData =

  15x7 table

      Dates         BA       BARC      BRBY       RBS      RDSA    SVT

   -----------    ------    ------    ------    ------    ----    ----

   24-Oct-2006       420       717     546.5    9369.4    1827    1445
   25-Oct-2006    416.75     712.5       557    9369.4    1842    1455
      ...                     ...       ...                ...        ...            ...         ..
   13-Nov-2006       419     706.5    556.25    9369.4    1914    1438
```

Create a table named fin that contains the 3rd and 5th variables of stockData.

```
>> fin =
```

2. Suppose you have a 30x12 table called 'weatherData' indicating the rainfall, day by day, of each month
of the year. What will be the size of y after the following command has been run?

```
>>y=varfun(@max,weatherData)
```

```
>>size(y)=
```

3. (Select all that apply) Which of the following are valid ways to store the contents of the variable `liborrate` (a 10x4 table) in a comma separated text file named 'libor.csv'?

   a.

   ```
   writetable(liborrate,'libor.csv');
   ```

   b.

   ```
   writetable(liborrate,libor.csv);
   ```

   c.

   ```
   libor = writetable(liborrate,'csv');
   ```

   d.

   ```
   libor = writetable(liborrate);
   ```

4. Write the function `row_col` that takes as input a vector v and returns a true value if v is a column vector and false if it is a row vector.

   ```
   >> function y = row_col(v)
   ```

5. Consider the vector

   ```
   >> r = rand(8,1);
   ```

   provide a one line command that returns the number of elements of r that are greater than 0.5.

   ```
   >>
   ```

6. Given the function

```
1.function y=fun(z)
2.y=(z+3).*2
3.end
```

and the commands

```
>> clear all
>>y=[1 2];
>> x=fun(y)
```

What is x?

7. Given the function

```
1.function y=fun(z)
2.y=(z+3).*2
3.end
```

and the following sequence of commands

```
>>clear all
>> x=fun([1 2])
>>z=x-y
```

What is z?

8. Given the vector:

```
x = [1 NaN 6 -5 0 5]
```

what is the result of the following command?

```
>>x==x
ans=
```

9. When A is a matrix and b is a scalar, the function `max(A,b)` returns a matrix with the same size of A, with the largest elements between A and b, as in the following example:

```
>>A = [1 7 3;
      6 2 9]
>>b= 5;
>>max(A,b)=
    [5 7 5;
     6 5 9]
```

Write a function called `mymax` that does the same thing <u>without calling the function max</u>

```
>> function y = mymax(A,b)
```

10. Write the function `issquared` that returns true if at least one of the numbers in a given vector is a square of one of the other elements. Otherwise it returns false.

For example, given the vector

```
A = [2 3 4];
```

it should return TRUE, while with

```
A = [2 3 ];
```

it should return FALSE.

(Hint: the function `intersect`   may be useful!)

```
>> function y = issquared(A)
```

The End.