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1)

a) Wildcard – VALID – alphanumeric

b) WILDCARD – VALID – alphanumeric

c) *Wildcard – INVALID – asterisk not allowed

d) 2Wildcard – INVAILD – variable name must start with a letter

e) Wild_card – VALID – alphanumeric and underscore; Underscore is allowed

f) Wildcard!! – INVALID – Exclamation mark not allowed

g) wild_card – valid - alphanumeric and underscore; Underscore is allowed

2)

5x5, 5x2, 2x5, 3x3, 3x1, 2x8 and 7x6

```
>> C=[x; x; x; x; x]

C =

     1     2     3     4     5
     1     2     3     4     5
     1     2     3     4     5
     1     2     3     4     5
     1     2     3     4     5

>> C=[x', x']

C =

     1     1
     2     2
     3     3
     4     4
     5     5
```

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```
>> C=[x; x]

C =

     1     2     3     4     5
     1     2     3     4     5

>> C=[y;y;y]

C =

     7     8     9
     7     8     9
     7     8     9

>> C=[y']

C =

     7
     8
     9

>> C=[x,y; x,y]
```

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```
>> C=[x,y; x,y]

C =

     1     2     3     4     5     7     8     9
     1     2     3     4     5     7     8     9

>> C=[y,y;y,y;y,y;y,y;y,y;y,y;y,y;y,y]

C =

     7     8     9     7     8     9
     7     8     9     7     8     9
     7     8     9     7     8     9
     7     8     9     7     8     9
     7     8     9     7     8     9
     7     8     9     7     8     9
     7     8     9     7     8     9
```

3)

a) sin(tan(x)) – tan(sin(x))

b) exp(-0.7.*x)+(1-cos(x))./(1.0+(tan(x)).^2)

c) (1+x./(x-0.5))./(1+(3.1.*x.*exp(-x)+2)./(sin(x)-cos(x.^2).^2))

d) (3.0^0.25)+log(2.1^3.7) + atan(0.63) = **4.6234**

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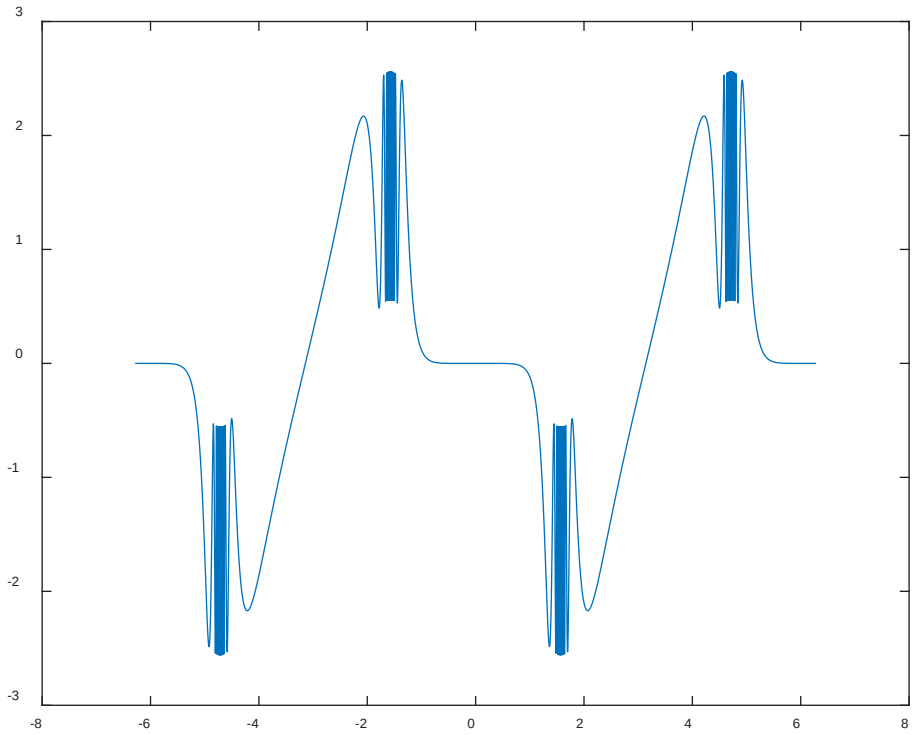
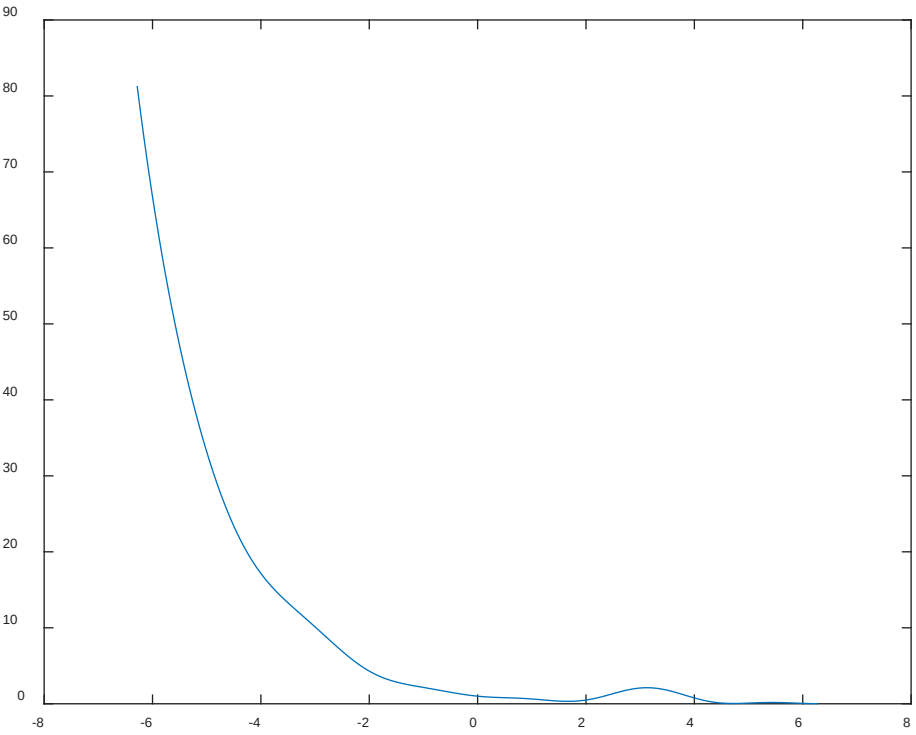
4) a)



b)



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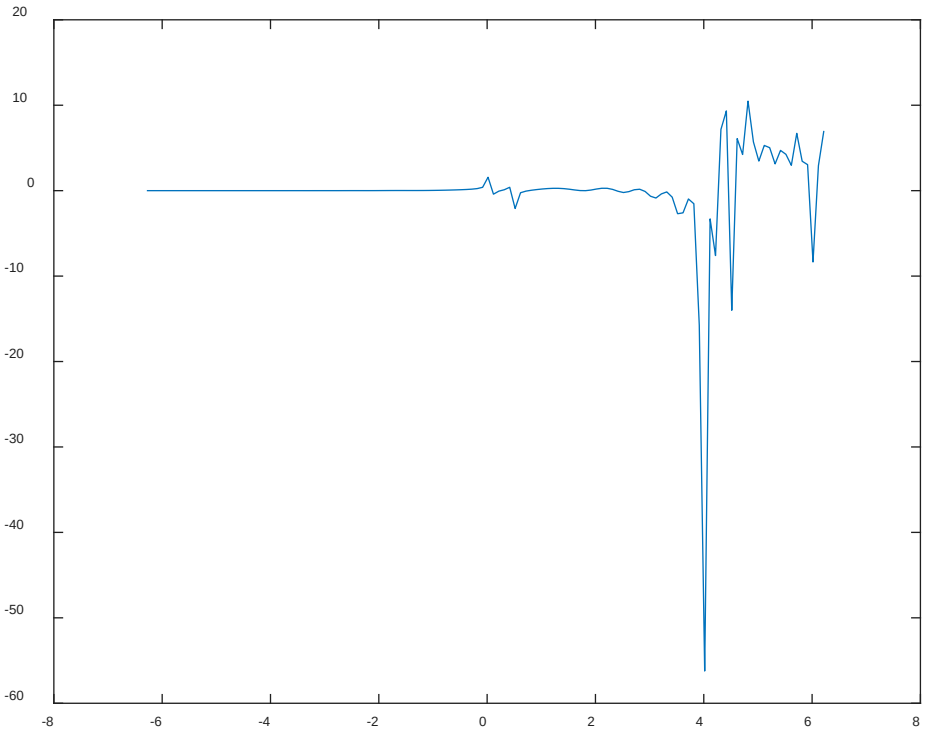
c)



5)

Size: 1 row, 8 columns. 1x8

Maximum value = 8.2

Minimum value = 2.1

Mean = 5.2525

Median = 5.4

Standard deviation = 2.0014

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```
>> t=[3.1 5.8 6.2 2.1 7.0 5.0 8.2 4.6]

t =

  Columns 1 through 5

    3.1000    5.8000    6.2000    2.1000    7.0000

  Columns 6 through 8

    5.0000    8.2000    4.6000

>> size(t)

ans =

     1     8

>> min(t)

ans =

    2.1000
```

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```
>> max(t)

ans =

    8.2000

>> mean(t)

ans =

    5.2500

>> median(t)

ans =

    5.4000

>> std(t)

ans =

    2.0000
```

```
>> sort(t)

ans =

  Columns 1 through 5

    2.1000    3.1000    4.6000    5.0000    5.8000

  Columns 6 through 8

    6.2000    7.0000    8.2000
```

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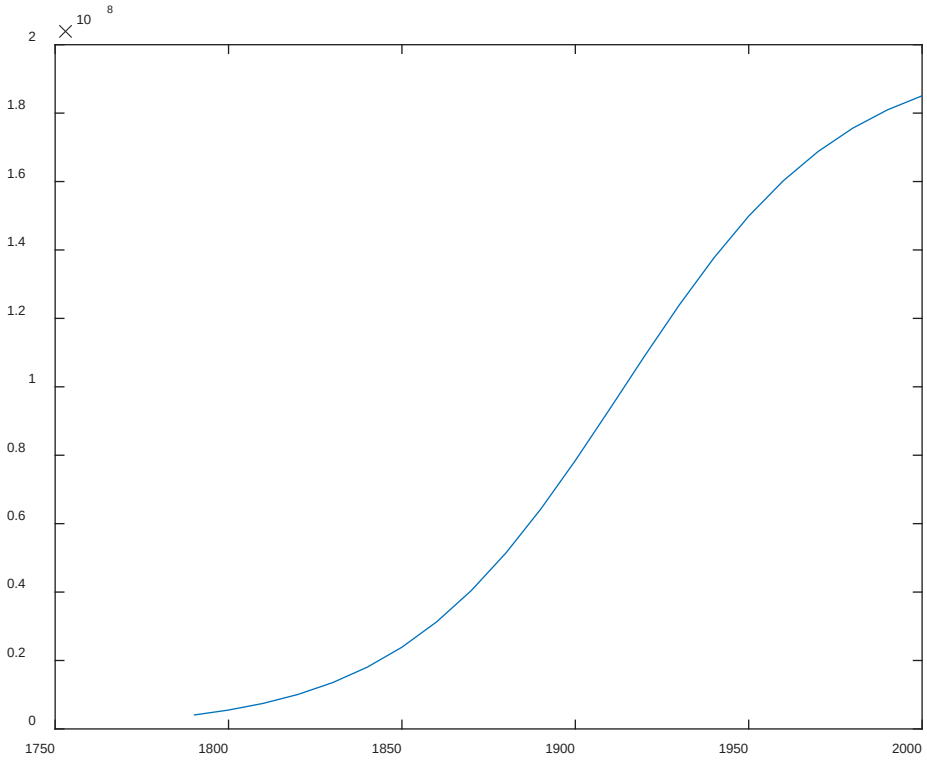
6)

```
>> t = 1790:10:2000;
>> p = 197273000./(1+exp(-0.03134*(t-1913.25)));
>> plot(t,p)
```



The population stays constant after 2000 in this graph.