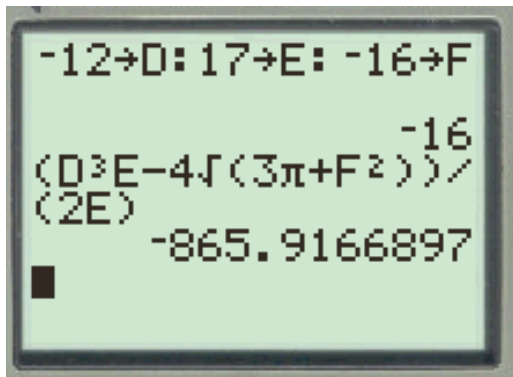


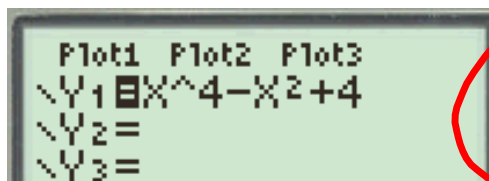
# TI-83 SELF ASSESSMENT SOLUTIONS

①



- 865.9167

②



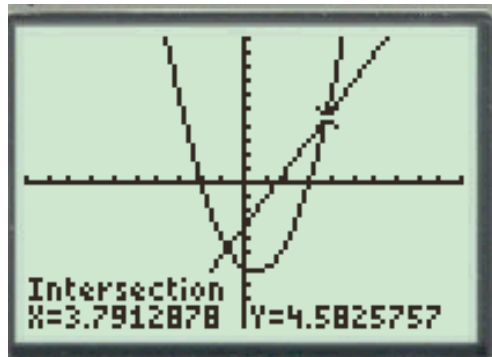
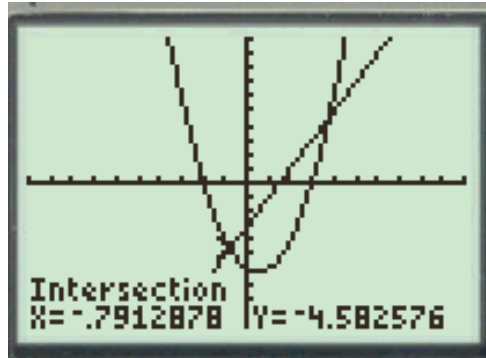
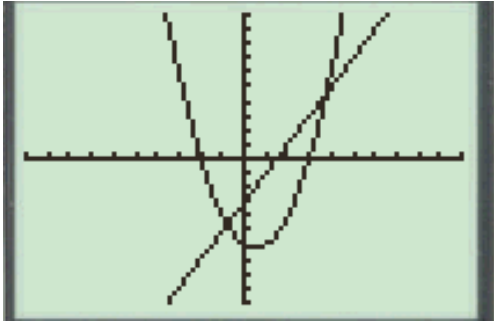
- ③ a)  $X \in [-10, 10], Y \in [-10, 10]$   
 b)  $X \in [-15.16, 15.16], Y \in [-10, 10]$   
 c)  $X \in [-4.7, 4.7], Y \in [-3.1, 3.1]$   
 d)  $X \in [-47, 47], Y \in [-31, 31]_{10}$

X	Y1
-5	604
0	4
5	604
10	9904
15	50404
20	159604
25	390004

X = -5

4

```
Plot1 Plot2 Plot3
Y1=X^2-X-6
Y2=2X-3
Y3=
Y4=
```



$(-0.7913, -4.5826)$

$(3.7913, 4.5826)$

5

```

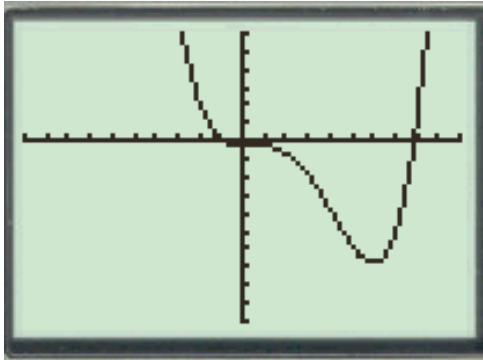
Plot1 Plot2 Plot3
\Y1= X^4-9X^3+9X^2-14
\Y2=

```

```

WINDOW
Xmin=-10
Xmax=10
Xscl=1
Ymin=-500
Ymax=300
Yscl=50
Xres=1

```



6

```

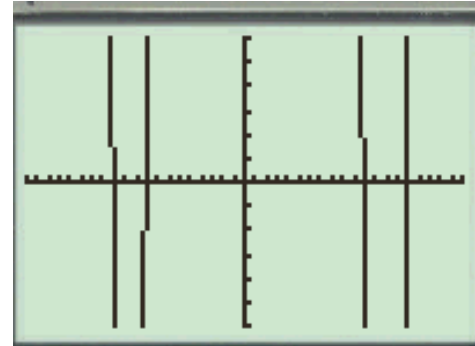
Plot1 Plot2 Plot3
\Y1= X^4-5X^3-273X^2+657X+17820
\Y2=

```

```

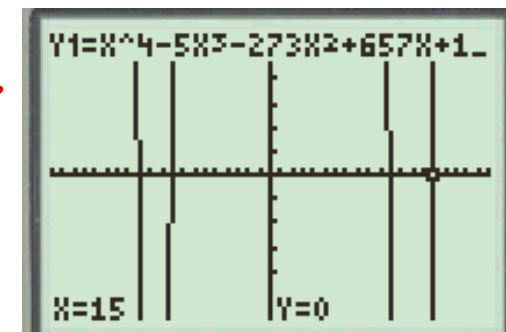
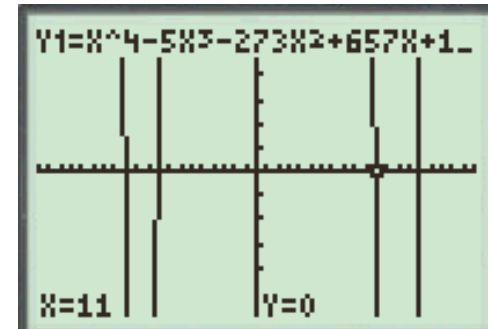
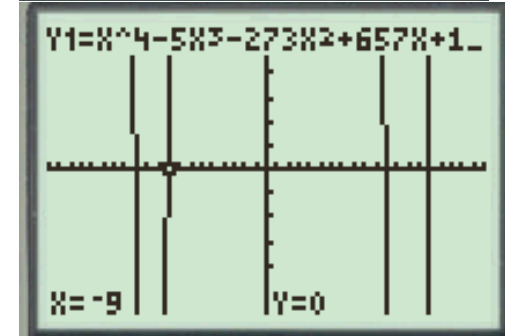
WINDOW
Xmin=-20
Xmax=20
Xscl=1
Ymin=-300
Ymax=300
Yscl=50
Xres=1

```



⑥  $\{-12, -9, 11, 15\}$

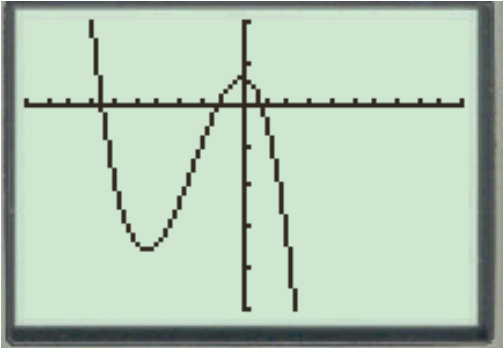
⑥  $(x+12)(x+9)(x-11)(x-15)$



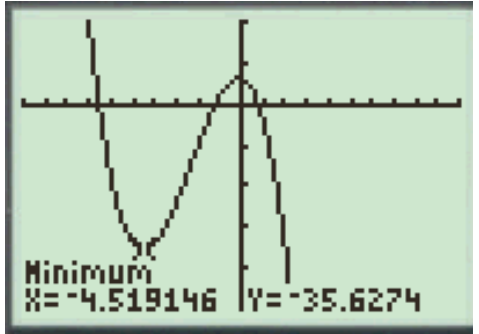
7

```
Plot1 Plot2 Plot3
\Y1=6-2X-7X^2-X^3
\Y2=
\Y3=
```

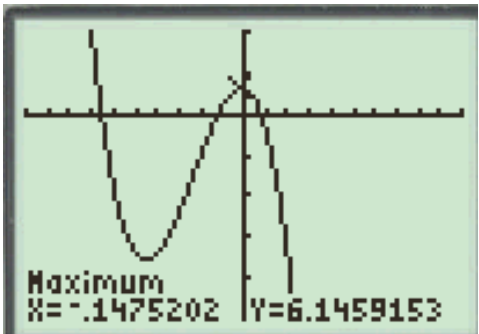
```
WINDOW
Xmin=-10
Xmax=10
Xscl=1
Ymin=-50
Ymax=20
Yscl=10
Xres=1
```



```
CALCULATE
1:value
2:zero
3:minimum
4:maximum
5:intersect
6:dy/dx
7:∫f(x)dx
```



REL. MIN.  
 $(-4.5191, -35.6274)$



REL. MAX.  
 $(-1.1475, 6.1459)$

8

```
MATRIX[A] 4 x4
-4      -6      1      ]
-1      12      -4      ]
-1      0       -7      ]
-5      -8      [ ]
4, 4=4
```

```
MATRIX[B] 4 x1
[ -17 ]
[ -3  ]
[ 52  ]
[ [ ] ]
4, 1=4
```

```
[A]-1*[B]
[[ -5 ]
 [ 6  ]
 [ .5 ]
 [ -3 ]]
```

CHECK:

```
-5→A: 6→B: .5→C: -3
→D
7A+4B-6C+D      -3
3A-B+12C-4D     -17
-3
```

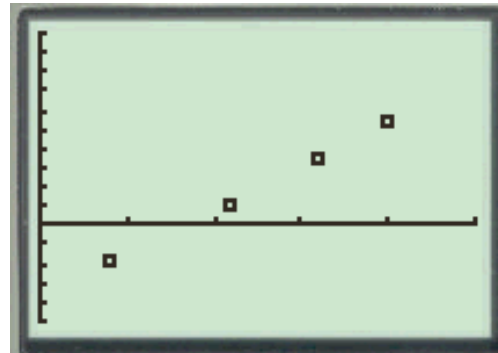
```
3A-B+12C-4D     -17
-5A+B-7D        -3
2A+5B-8C+4D     52
4
```

SOLUTION:  $(-5, 6, \frac{1}{2}, -3)$

9) a)

L1	L2	L3	Z
4	-1.8	-----	
11	1.1		
16	3.5		
20	5.3		
-----	-----		

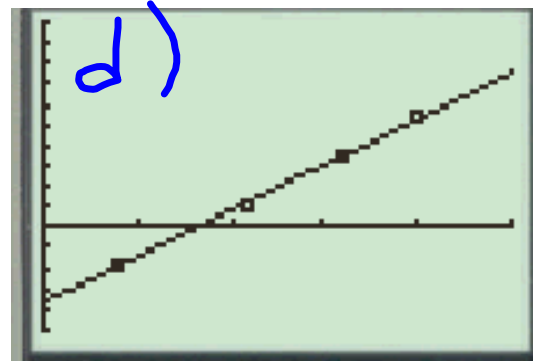
L2(5) =



```
LinReg
y=ax+b
a=.445709282
b=-3.657793345
r²=.9989697249
r=.9994847297
```

```
Plot1 Plot2 Plot3
Off Off
Type: [ ] [ ] [ ]
      [ ] [ ] [ ]
Xlist:L1
Ylist:L2
Mark: [ ] + .
```

```
EDIT [ ] [ ] TESTS
1:1-Var Stats
2:2-Var Stats
3:Med-Med
4:LinReg(ax+b)
5:QuadReg
6:CubicReg
7:QuartReg
```



e)

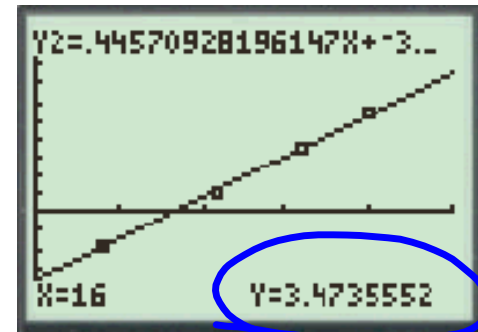
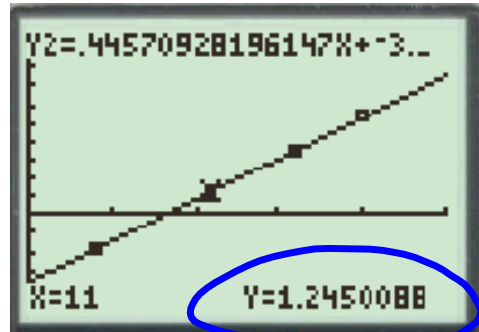
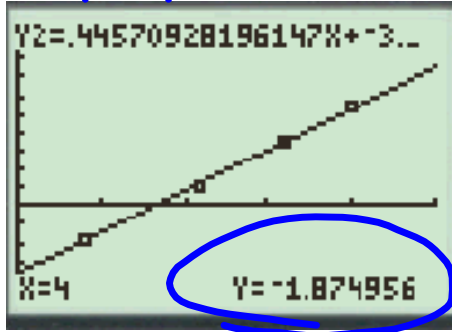
```
WINDOW
Xmin=0
Xmax=25
Xscl=5
Ymin=-5
Ymax=10
Yscl=1
Xres=1
```

```
LinReg(ax+b) L1,
L2,Y2
```

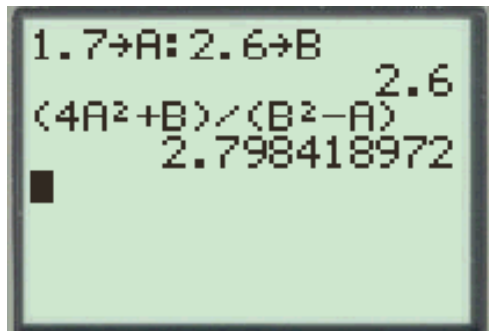
```
Plot1 Plot2 Plot3
Y1=[ ]
Y2=.44570928196
147X+ -3.65779334
50087
Y3=
Y4=
Y5=
```

f, c)

9) f)



10



$$= 2.7984$$

11

```

Plot1 Plot2 Plot3
Y1=X^3-X^2+4X-7
Y2=
Y3=
Y4=
Y5=
Y6=
Y7=

```

```

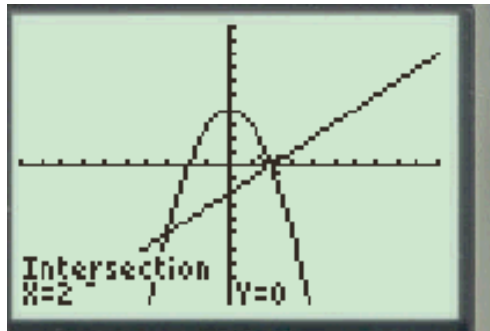
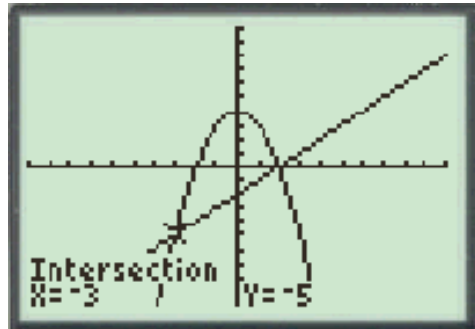
TABLE SETUP
TblStart=2
ΔTbl=.5
Indent: Ask
Depend: Auto Ask

```

X	Y1
2	5
2.5	12.375
3	23
3.5	37.625
4	57
4.5	81.875
5	113

X=4

12



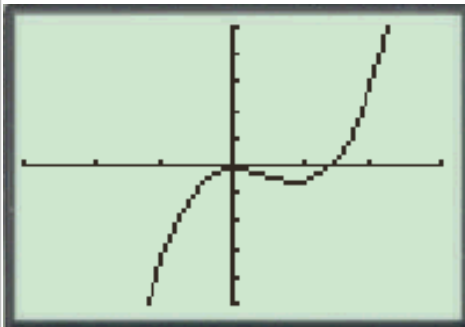
$(-3, -5)$   $(2, 0)$



13

```
Plot1 Plot2 Plot3
Y1=X^3-7X^2+2X-18
Y2=
```

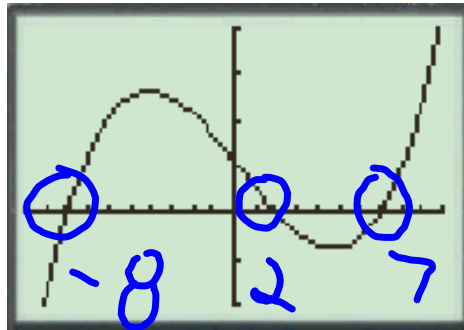
```
WINDOW
Xmin=-15
Xmax=15
Xscl=5
Ymin=-500
Ymax=500
Yscl=100
Xres=1
```



14

```
Plot1 Plot2 Plot3
Y1=X^3-X^2-58X+11
Y2=
```

```
WINDOW
Xmin=-10
Xmax=10
Xscl=1
Ymin=-200
Ymax=400
Yscl=100
Xres=1
```



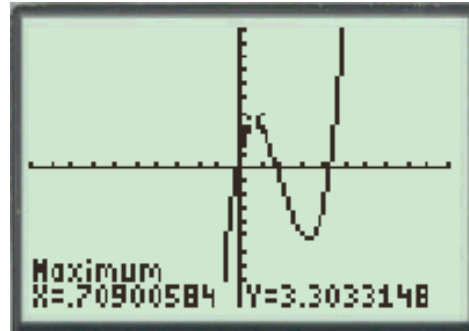
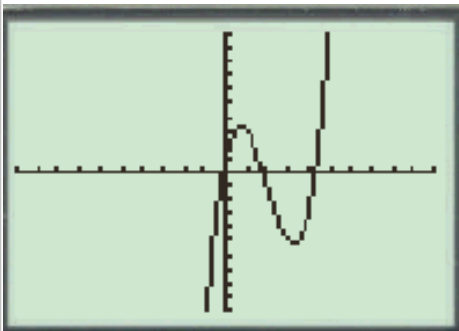
a)  $\{-8, 2, 7\}$

b)  $(x+8)(x-2)(x-7)$

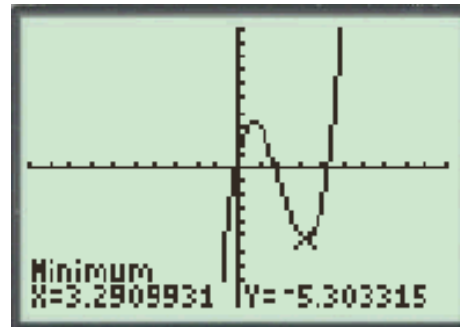
15

```
Plot1 Plot2 Plot3
Y1=X^3-6X^2+7X+1
Y2=
```

```
WINDOW
Xmin=-10
Xmax=10
Xscl=1
Ymin=-10
Ymax=10
Yscl=1
Xres=1
```



REL. MAX.  
(.7090, 3.3033)



REL. MIN.  
(3.2910, -5.3033)

16

MATRIX[A] 3 x3  
[ 5     -4     1 ]  
[ 7     -6     -4 ]  
[ 8     5     -7 ]  
  
3 x 3 = -7

MATRIX[B] 3 x1  
[ -4 ]  
[ 1.3 ]  
[ 11.35 ]  
  
3 x 1 = 11.35

[A]<sup>-1</sup>\*[B]  
[[.6 ]  
[.75]  
[-.4]]

Ans→Frac  
[[3/5 ]  
[3/4 ]  
[-2/5]]

.6→X  
.75→Y  
-.4→Z  
  
■

5X-4Y+Z     -.4  
7X-6Y-4Z     1.3  
8X+5Y-7Z     11.35  
  
■