7-2 Skills Practice

Graphing Polynomial Functions

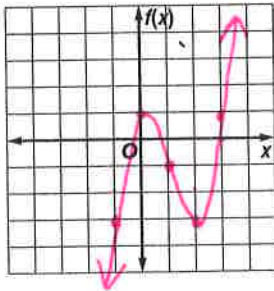Complete each of the following.
a. Graph each function by making a table of values.
b. Determine consecutive values of x between which each real zero is located.
c. Estimate the x-coordinates at which the relative maxima and minima occur.
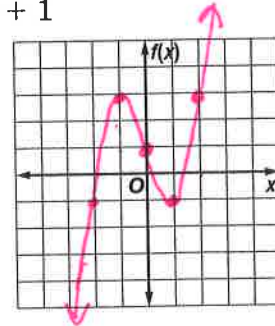
1. $f(x) = x^3 - 3x^2 + 1$

x	f(x)
-2	-19
-1	-3
0	1
1	-1
2	-3
3	1
4	17

B) X=-.53   X= 2.88
   X=.65

C) X=0 max
   X=+2 min

2. $f(x) = x^3 - 3x + 1$

x	f(x)
-3	-17
-2	-1
-1	3
0	1
1	-1
2	3
3	19

B) X=-1.88
   X=.35
   X=1.53

C) X=-1 max
   X=1 min

3. $f(x) = 2x^3 + 9x^2 + 12x + 2$

x	f(x)
-3	-7
-2	-2
-1	-3
0	2
1	25
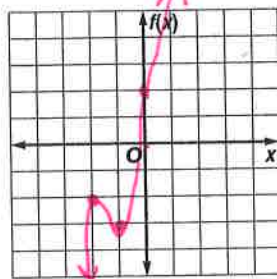
B)x= -.19

C) max : X=-2
   min : X=-1

4. $f(x) = 2x^3 - 3x^2 + 2$

x	f(x)
-1	-3
0	2
1	1
2	6
3	29
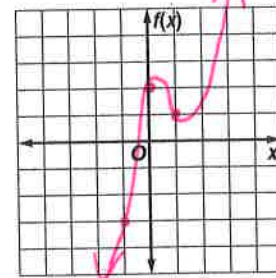
B) X=-.68

C) min X=1
   max X=0

5. $f(x) = x^4 - 2x^2 - 2$

x	f(x)
-3	61
-2	6
-1	-3
0	-2
1	-3
2	6
3	61
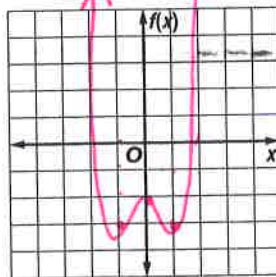
B) X=-1.65
   X=1.65

C)max: x=0
  min: X=-1, X=1

6. $f(x) = 0.5x^4 - 4x^2 + 4$

x	f(x)
-3	8.5
-2	-4
-1	0.5
0	4
1	0.5
2	-4
3	8.5

X=1.08
B) X=-2.61
   X=-1.08
   X=2.61

C)max: x=0
  min: X=-2
       X=2

Glencoe Algebra 2