

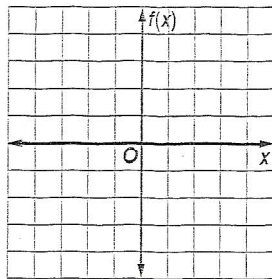
Analyze Graphs of Polynomial Functions

Complete each of the following.

- Graph each function by making a table of values.
- Determine consecutive values of x between which each real zero is located.
- Estimate the x -coordinates at which the relative and relative minima occur.

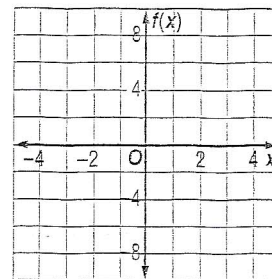
1. $f(x) = -x^3 + 3x^2 - 3$

x	$f(x)$
-2	
-1	
0	
1	
2	
3	
4	



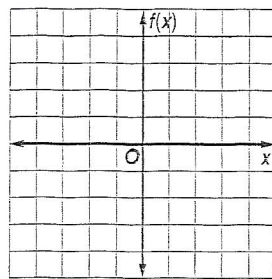
2. $f(x) = x^3 - 1.5x^2 - 6x + 1$

x	$f(x)$
-2	
-1	
0	
1	
2	
3	
4	



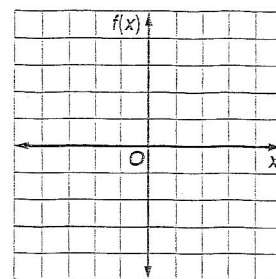
3. $f(x) = 0.75x^4 + x^3 - 3x^2 + 4$

x	$f(x)$



4. $f(x) = x^4 + 4x^3 + 6x^2 + 4x - 3$

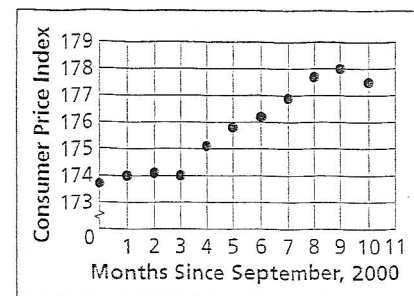
x	$f(x)$



PRICES For Exercises 5 and 6, use the following information.

The Consumer Price Index (CPI) gives the relative price for a fixed set of goods and services. The CPI from September, 2000 to July, 2001 is shown in the graph.

Source: U. S. Bureau of Labor Statistics



- Describe the turning points of the graph.
- If the graph were modeled by a polynomial equation, what is the least degree the equation could have?
- LABOR** A town's jobless rate can be modeled by (1, 3.3), (2, 4.9), (3, 5.3), (4, 6.4), (5, 4.5), (6, 5.6), (7, 2.5), (8, 2.7). How many turning points would the graph of a polynomial function through these points have? Describe them.