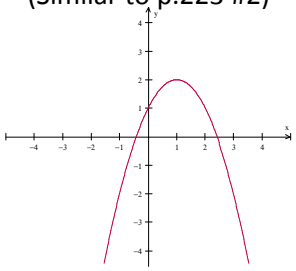
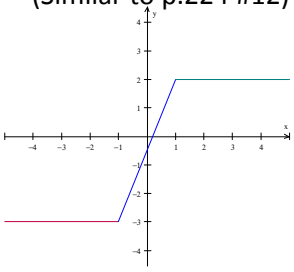
More on Functions and Their Graphs

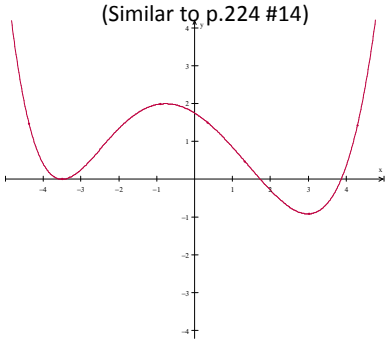
1. Use the graph to determine intervals where the function is increasing, decreasing, and constant.
(Similar to p.223 #2)



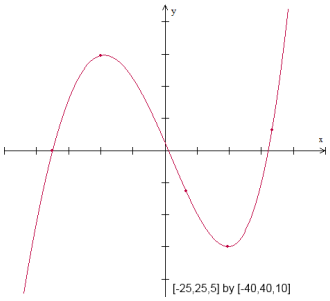
2. Use the graph to determine intervals where the function is increasing, decreasing, and constant.
(Similar to p.224 #12)



3. Use the graph to determine any relative maximum(s) and relative minimum(s)
(Similar to p.224 #14)



4. Use the graph to determine any relative maximum(s) and relative minimum(s)
(Similar to p.224 #16)



5. Determine whether each function is even, odd, or neither:
(Similar to p.224 #18-28)

$$f(x) = x^5 - x^3$$

6. Determine whether each function is even, odd, or neither:
(Similar to p.224 #18-28)

$$g(x) = x^4 - x^3$$

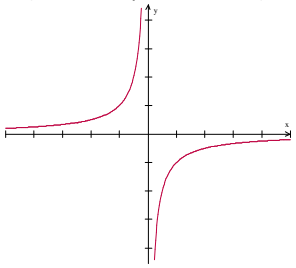
7. Determine whether each function is even, odd, or neither:
(Similar to p.224 #18-28)

$$h(x) = 3x^2 + 1$$

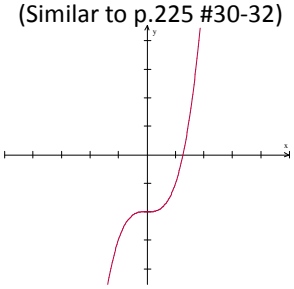
8. Determine whether each function is even, odd, or neither:
(Similar to p.224 #18-28)

$$f(x) = x^7 - x$$

9. Use possible symmetry to determine whether each graph is the graph of an even function, an odd function, or a function that is neither even nor odd:
(Similar to p.225 #30-32)



10. Use possible symmetry to determine whether each graph is the graph of an even function, an odd function, or a function that is neither even nor odd:
(Similar to p.225 #30-32)



11. Evaluate each piecewise function at the given values of the independent variable:
(Similar to p.226 #38)

$$f(x) = \begin{cases} 9x+2 & \text{if} \quad x < 2 \\ 8x-1 & \text{if} \quad x \geq 2 \end{cases}$$

$a) f(-5)$

$b) f(2)$

$c) f(8)$

12. Evaluate each piecewise function at the given values of the independent variable:
(Similar to p.226 #42)

$$h(x)=\begin{cases}\dfrac{7x-1}{x+2} & if \quad x\neq -2\\ 4 & if \quad x=-2\end{cases}$$

$a) h(-5)$

$b) h(-2)$

$c) h(4)$

13. Graph:
(Similar to p.226 #48)

$$f(x)=\begin{cases}x-3 & if \quad x<-2\\ x+1 & if \quad x\geq -2\end{cases}$$

14. Graph:
(Similar to p.226 #54)

$$f(x)=\begin{cases}2 & if \quad x<-2\\ -2x & if \quad -2\leq x<0\\ x^2+3 & if \quad x\geq 0\end{cases}$$