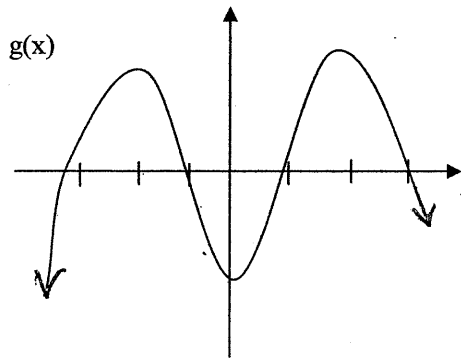


### 3.6b Interpreting Derivative Graphs – More Practice

Sketch the derivative graphs for the below  $f(x)$ .

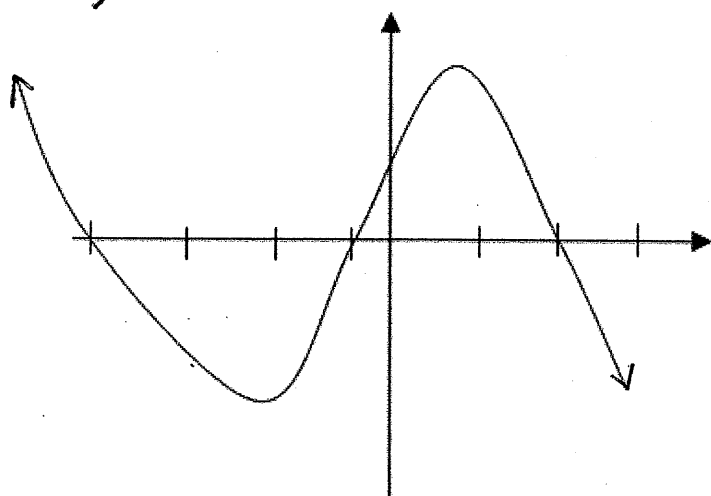
1)



Sketch  $g'(x)$  graph:

Sketch  $g''(x)$  graph: (POI at  $x = -1$  and  $x = 1$ )

2)  $f'(x)$  graph show



Sketch the  $f(x)$  graph:

Sketch the  $f''(x)$  graph:

Characteristics of  $f(x)$

increasing: \_\_\_\_\_ decreasing \_\_\_\_\_

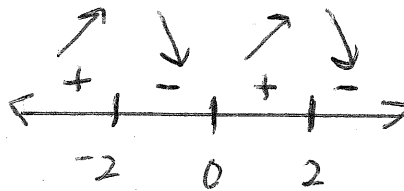
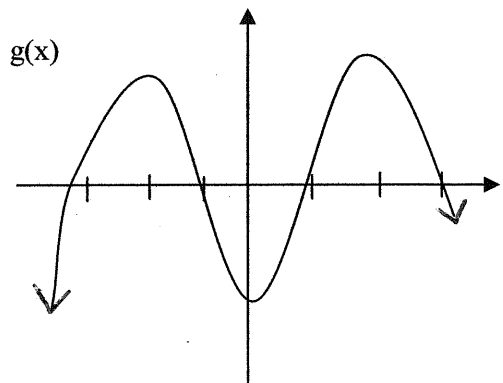
rel. max \_\_\_\_\_ rel. min \_\_\_\_\_

Concave up \_\_\_\_\_ Concave Down \_\_\_\_\_

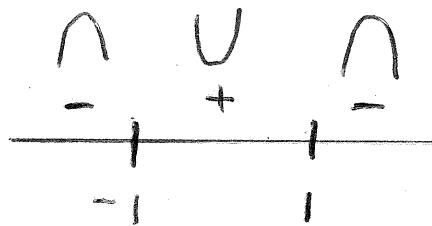
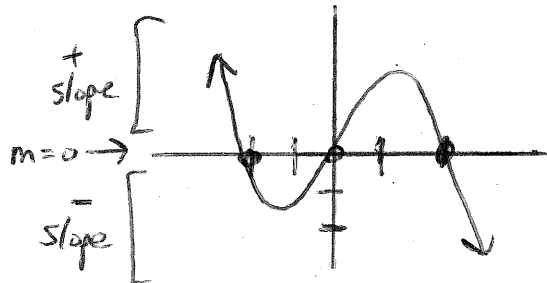
POI \_\_\_\_\_

### 3.6b Interpreting Derivative Graphs – More Practice

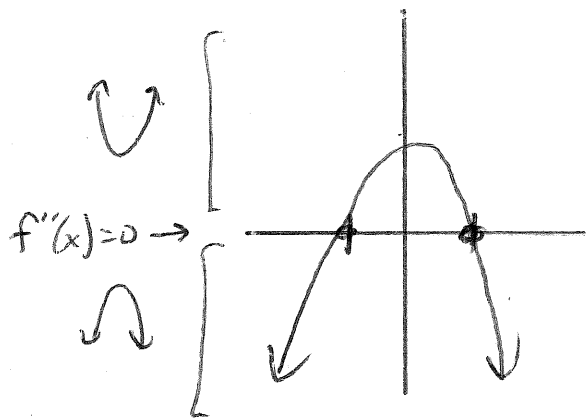
Sketch the derivative graphs for the below  $f(x)$



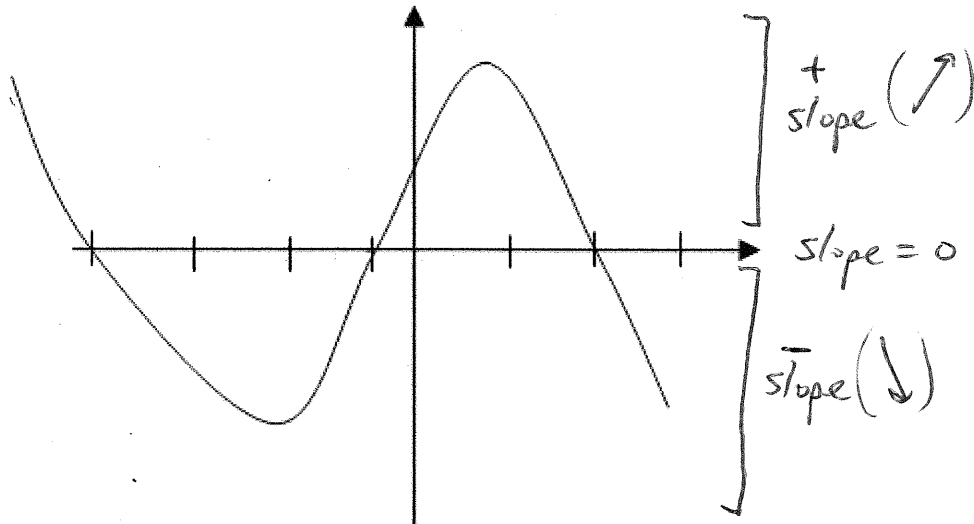
Sketch  $g'(x)$  graph:



Sketch  $g''(x)$  graph: (POI at  $x = -1$  and  $x = 1$ )

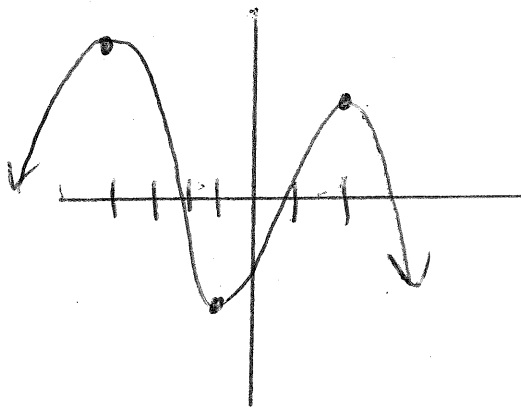
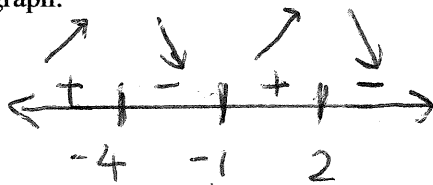


2.  $f'(x)$  graph show



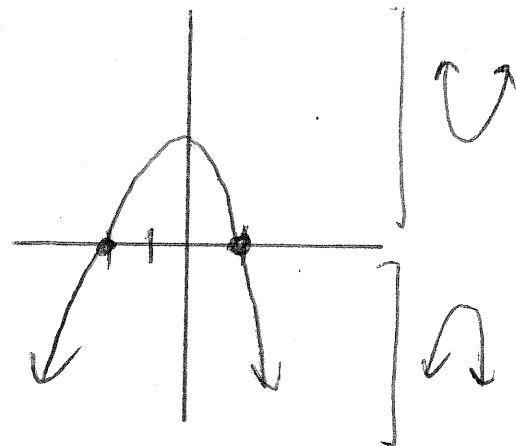
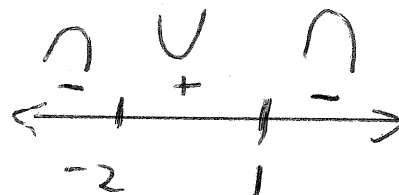
$f(x)$	$f'(x)$	$f''(x)$
X		
M	X	
P	M	X
	P	M
		P

Sketch the  $f(x)$  graph:



Sketch the  $f''(x)$  graph:

\*POI exists at max/min of  $f'(x)$  graph



Characteristics of  $f(x)$

increasing:  $(-\infty, -2) \cup (-1, 2)$  decreasing  $(-4, -1) \cup (2, \infty)$

rel. max  $x = -2, x = 2$  rel. min  $x = -1$

Concave up  $(-2, 1)$  Concave Down  $(-\infty, -2) \cup (1, \infty)$

POI  $x = -2, 1$