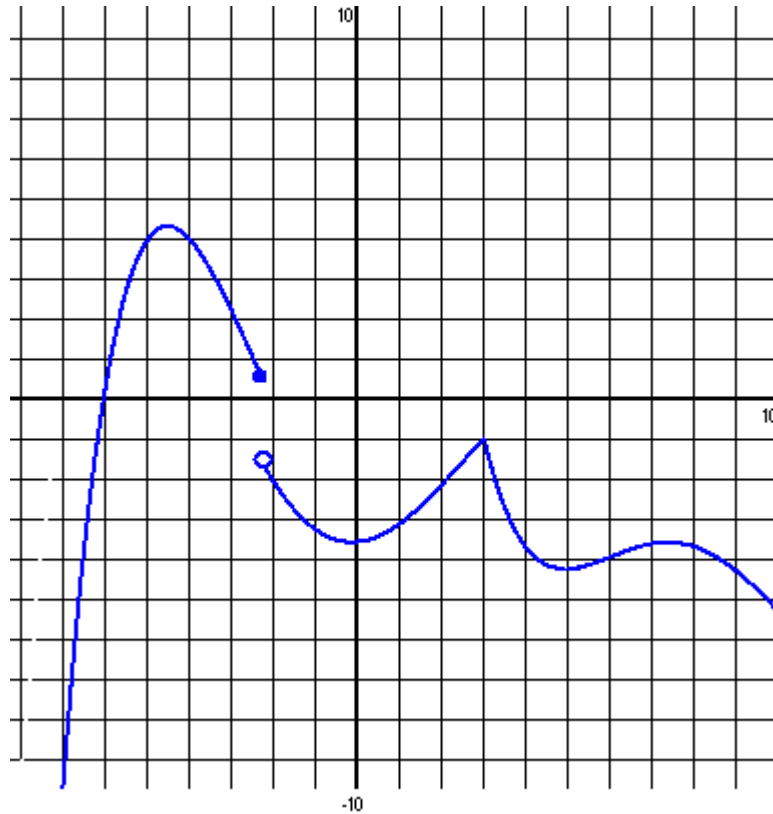


### Worksheet 2: Derivative Estimation Worksheet

The figure below shows the graph of a function  $y = f(x)$ . Refer to this graph in answering the questions below.



- Using graphical methods, estimate the  $f'(x)$  for several different values of  $x$ , and enter your results in the table below.

$x$	-6	-5	-3	0	2	4	6	7	8
$f'(x)$	6?								

- Are there any points where  $f'(x)$  is undefined? Any points where  $f'(x) = 0$ ?
- Using your data points and answers to 2, sketch a graph for the curve  $y = f'(x)$  on the graph on the back of this page. For each column in the table you will plot one point. For example, the first column gives you the point  $(-6, 6)$ . After you plot the individual points, try to draw a smooth curve that goes through them.
- The combined graph shows both curves:  $y = f(x)$  and  $y = f'(x)$ . Study how these graphs are related. For example, compare the two curves at points where  $f'(x)$  is undefined, and at points where  $y = f(x)$  has a high or low point.

