

x	$-\infty$		0		$+\infty$
$f'(x)$	5	$+$	0	$-$	-10
$f(x)$			10		
	$-\infty$				-10

The diagram illustrates the behavior of the function $f(x)$ based on the sign of its derivative $f'(x)$. The derivative is positive for $x < 0$ and negative for $x > 0$, indicating a local maximum at $x = 0$. The function value at this maximum is 10 . As x approaches $-\infty$, the function value approaches $-\infty$. As x approaches $+\infty$, the function value approaches -10 . Arrows in the diagram point from the value 10 at $x = 0$ towards the values at $-\infty$ and $+\infty$.