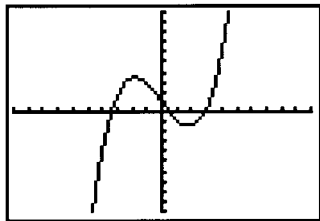


**33** (a) From the graph of  $f$ , we see that  $f(x) = 0.2x^3 - 2x + 1$  represents a nonlinear function. See *Figure 33*.

(b) The intervals where  $f$  increases or decreases can be determined by tracing the graph of  $f$ . When the  $y$ -values increase as the cursor moves from left to right,  $f$  is increasing. Similarly, when the  $y$ -values decrease as the cursor moves from left to right,  $f$  is decreasing. The function  $f$  increases for  $x \leq -k$ , decreases for  $-k \leq x \leq k$ , and then increases for  $x \geq k$ , where  $k \approx 1.8$ . *Answers may vary slightly.*

$[-10, 10, 1]$  by  $[-10, 10, 1]$



*Figure 33*