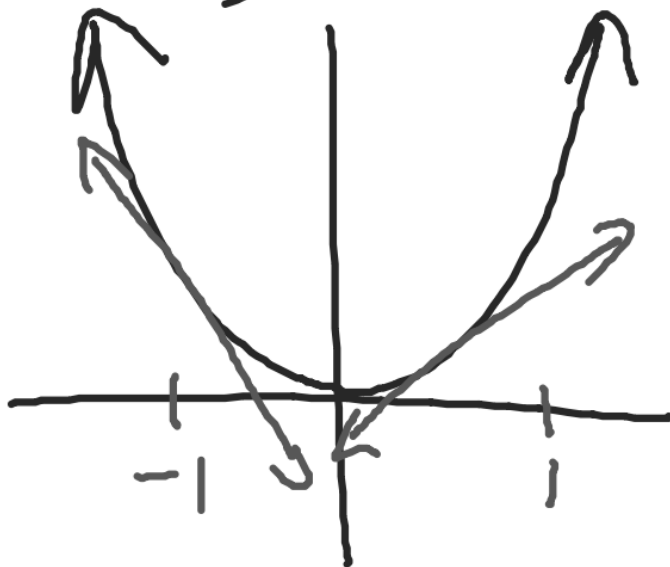


HW
2.2
p. 162

17, 23

17

~~HW~~



23 $f(x) = x^3 - 3x + 5$ $D: \{\mathbb{R}\}$

$f'(x) = \lim_{h \rightarrow 0} \frac{(x+h)^3 - 3(x+h) + 5 - (x^3 - 3x + 5)}{h}$

$= \lim_{h \rightarrow 0} \frac{x^3 + 3x^2h + 3xh^2 + h^3 - 3x - 3h + 5 - x^3 + 3x - 5}{h}$

$= \lim_{h \rightarrow 0} 3x^2 + 3xh + h^2 - 3$

$\therefore 3x^2 - 3 \quad D: \{(-\infty, \infty)\}$