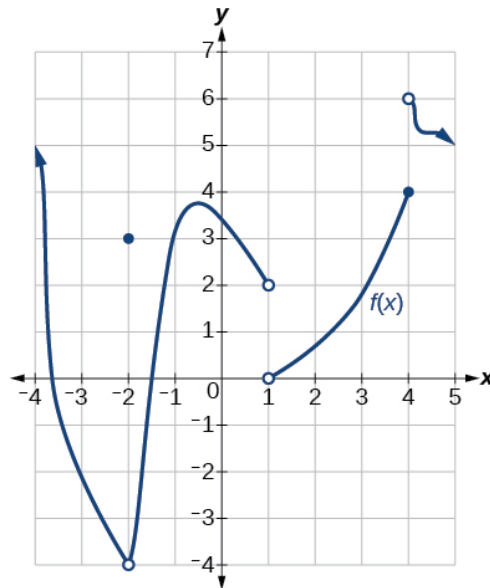


Show all work and circle/box your final answer. All answers must be simplified unless stated otherwise.

1. If $f(x) = 2x^2$, find $\frac{f(x+h) - f(x)}{h}$

2. Find $\lim_{x \rightarrow a} f(x)$ for the following values of a . If the limit does not exist, find $\lim_{x \rightarrow a^+} f(x)$ and $\lim_{x \rightarrow a^-} f(x)$



(a) $a = -2$

(b) $a = 1$

(c) $a = 4$