

Name ANSWER KEY _____ points

Simplify the difference quotient: $\frac{f(a+h)-f(a)}{h}$, $f(x) = 2x-5$.

$$\begin{aligned}\frac{f(a+h)-f(a)}{h} &= \frac{[2(a+h)-5]-[2a-5]}{h} = \frac{2a+2h-5-2a+5}{h} \\ &= \frac{2h}{h} = \boxed{2}\end{aligned}$$