

Let  $f(x) = x^2 + x$  and  $g(x) = 3x - 1$ . Evaluate the following limits

1.  $\lim_{x \rightarrow 2} \frac{f(x) - f(2)}{x - 2}$

4.  $\lim_{h \rightarrow 0} \frac{g(2 + h) - g(2)}{h}$

2.  $\lim_{h \rightarrow 0} \frac{f(2 + h) - f(2)}{h}$

5.  $\lim_{h \rightarrow 0} \frac{g(3 + h) - g(3)}{h}$

3.  $\lim_{x \rightarrow 2} \frac{f(x)}{g(x)}$

6.  $\lim_{x \rightarrow 2} f(g(x))$