

**Calculus AB
Worksheet #9**

	For #1 – 4 below, find: a) $f(x+h)$ b) $f(x+h) - f(x)$ c) $\frac{f(x+h) - f(x)}{h}$
1)	$f(x) = x^2$
2)	$f(x) = \frac{1}{2x}$
3)	$f(x) = 5x - 4$
4)	$f(x) = (3x - 1)^2$

Answers:

1	$x^2 + 2xh + h^2$	$h(2x + h)$	$2x + h$
2	$\frac{1}{2(x+h)}$	$\frac{-h}{2x(x+h)}$	$\frac{-1}{2x(x+h)}$
3	$5x + 5h - 4$	$5h$	5
4	$9x^2 + 18xh + 9h^2 - 6x - 6h + 1$	$18xh + 9h^2 - 6h$	$18x + 9h - 6$