

① ② ③

- Refer to the function f given below. Evaluate $f(0)$, $f(-5)$, and $f(3)$.

$$f(x) = \begin{cases} 3x - 2, & x < 0 \\ x^2 + 1, & x \geq 0 \end{cases}$$

① To evaluate $f(0)$, we see which "piece" applies

when $x = 0$. $x = 0$ is included with the

second piece. $f(0) = (0)^2 + 1 = \boxed{1}$

② To get $f(-5)$, we evaluate f when $x = -5$.

Since $-5 < 0$, we must use the first piece.

$$f(-5) = 3(-5) - 2 = -15 - 2 = \boxed{-17}$$

③ To get $f(3)$, we use the second piece

(since $3 \geq 0$).

$$f(3) = (3)^2 + 1 = 9 + 1 = \boxed{10}$$