9. $\lim_{x \to 4} \frac{2x^2 - 9x + 4}{x - 4}$ (KEY H)

FACTOR / CANCEL METHOD

① FACTOR TOP, FACTOR BOTTOM

② CANCEL IF POSSIBLE

③ PLUG IN VALUE AND SIMPLIFY

$\lim_{x \to 4} \frac{(2x - 1)(x - 4)}{x - 4}$

$\lim_{x \to 4} (2x - 1)$

$2(4) - 1$

$8 - 1$

7

10. $\lim_{x \to -3} \frac{x^2 - 4x - 21}{x^2 - 9}$ (PSD) (DOTS)

$\lim_{x \to -3} \frac{(x - 7)(x + 3)}{(x + 3)(x - 3)}$

$\lim_{x \to -3} \frac{x - 7}{x - 3}$

$\frac{-3 - 7}{-3 - 3}$

$= \frac{-10}{-6}$

$= \frac{5}{3}$

11. $\lim_{x \to 2} f(x)$

$f(x) = \begin{cases} 3x - 1, & x \neq 2 \\ 7, & x = 2 \end{cases}$ CAME LESS

$= 3(2) - 1$

$= 6 - 1$

$= 5$