

$$\begin{aligned} A(x) &= \frac{f(x) - f(3)}{x - 3} \\ &= \frac{\left(\frac{1}{3}x^2 - 4\right) - (-1)}{x - 3} \\ &= \frac{\frac{1}{3}x^2 - 3}{x - 3} \\ &= \frac{x^2 - 9}{3(x - 3)} \\ &= \frac{(x - 3)(x + 3)}{3(x - 3)} \\ &= \frac{(x + 3)}{3}, x \neq 3 \end{aligned}$$