

Diagram illustrating the localization of functions near  $x = -2$ :

- Top row:  $\frac{x^3 - 4x^2 - 5x + 6}{x^2 - 4x + 3}$  is localized near  $-2$ , resulting in  $\frac{x^3 - 4x^2 - 5x + 6}{x^2 - 4x + 3} \Big|_{x \text{ near } -2}$ .
- Bottom row:  $x^2 - 4x + 3$  is localized near  $-2$ , resulting in  $x^2 - 4x + 3 \Big|_{x \text{ near } -2}$ .