$f := x \to expand((x-2)\cdot(x+3)\cdot(x+7))$

$$f := x \mapsto expand((x-2)\ (x+3)\ (x+7)) \quad \textbf{(1)}$$

$f(x)$

$$x^3 + 8\,x^2 + x - 42 \quad \textbf{(2)}$$

$g := x \to expand((x-2)\cdot(x+7))$

$$g := x \mapsto expand((x-2)\ (x+7)) \quad \textbf{(3)}$$

$h := x \to \frac{f(x)}{g(x)}$

$$h := x \mapsto \frac{f(x)}{g(x)} \quad \textbf{(4)}$$

$h(x)$

$$\frac{x^3 + 8\,x^2 + x - 42}{x^2 + 5\,x - 14} \quad \textbf{(5)}$$

$h(1.999)$

$$4.999000000 \quad \textbf{(6)}$$

$h(2.001)$

$$5.001000000 \quad \textbf{(7)}$$

$h(2)$

Error, (in h) numeric exception: division by zero