

$$f := x \mapsto (x - 7)^3 \cdot (x + 1)^2$$
$$f := x \mapsto (x - 7)^3 \cdot (x + 1)^2 \quad \mathbf{(1)}$$

$$fp := D(f)$$
$$fp := x \mapsto 3 \cdot (x - 7)^2 \cdot (x + 1)^2 + 2 \cdot (x - 7)^3 \cdot (x + 1) \quad \mathbf{(2)}$$

$$fpp := D(fp)$$
$$fpp := x \mapsto 6 \cdot (x - 7) \cdot (x + 1)^2 + 12 \cdot (x - 7)^2 \cdot (x + 1) + 2 \cdot (x - 7)^3 \quad \mathbf{(3)}$$

$$\text{expand}(fp(x))$$
$$5x^4 - 76x^3 + 318x^2 - 140x - 539 \quad \mathbf{(4)}$$

$$\text{factor}(fp(x))$$
$$(x - 7)^2 (x + 1) (5x - 11) \quad \mathbf{(5)}$$

$$\text{factor}(fpp(x))$$
$$4(x - 7)(5x^2 - 22x + 5) \quad \mathbf{(6)}$$