

$$g) \left(\frac{2x}{x^2+3x+1} \right)' = \frac{2 \cdot (x^2+3x+1) - 2x \cdot (2x+3)}{(x^2+3x+1)^2}$$

$$= \frac{2x^2+6x+2-4x^2-6x}{(x^2+3x+1)^2} = \frac{-2x^2+2}{(x^2+3x+1)^2}$$

$$h) \left(\frac{(a-2x)^2}{\sqrt{a-2x}} \right)' = \left[(a-2x)^2 \cdot (a-2x)^{-\frac{1}{2}} \right]'$$

$$= \left[(a-2x)^{\frac{3}{2}} \right]'$$

$$= \frac{3}{2} \cdot (a-2x)^{\frac{1}{2}} \cdot (-2) = -3 \cdot \sqrt{a-2x}$$

$$i) \left(\frac{-2}{1-t^2} \right)' = -2 \cdot \frac{-(1-t^2)'}{(1-t^2)^2} = 2 \cdot \frac{-2t}{(1-t^2)^2} = \frac{-4t}{(1-t^2)^2}$$

$$j) \left(2\sqrt{1-\frac{x^2}{9}} \right)' = \cancel{2} \cdot \frac{1}{\cancel{2}\sqrt{1-\frac{x^2}{9}}} \cdot \frac{-2x}{9} = \frac{-2x}{9\sqrt{1-\frac{x^2}{9}}}$$

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$$a) \left[(t^2-3t+4)^3 \right]' = 3 \cdot (t^2-3t+4)^2 \cdot (2t-3)$$

$$b) \left[x(x-1)(x^2+2) \right]' = \left[(x^2-x)(x^2+2) \right]'$$

$$= (2x-1)(x^2+2) + (x^2-x) \cdot 2x$$

$$= 2x^3+4x-x^2-2+2x^3-2x^2$$

$$= 4x^3-3x^2+4x-2 \quad (\text{VOIR REMARQUE PAGE 4})$$

$$c) \left[\frac{1}{(x-k)^2} \right]' = \left[(x-k)^{-2} \right]' = -2 \cdot (x-k)^{-3} = \frac{-2}{(x-k)^3}$$

$$d) \left(\frac{4t^3}{3} + 4t^2 - \frac{2}{t} \right)' = \frac{4}{3} \cdot 3t^2 + 4 \cdot 2t - 2 \cdot \frac{-1}{t^2}$$

$$= 4t^2 + 8t + \frac{2}{t^2}$$

$$e) \left(\frac{1}{1+x} \right)' = \frac{-(1+x)'}{(1+x)^2} = \frac{-1}{(1+x)^2}$$

$$f) \left[x \cdot (3-2x)^{\frac{2}{3}} \right]' = 1 \cdot (3-2x)^{\frac{2}{3}} + x \cdot \frac{1}{3} \cdot (3-2x)^{-\frac{1}{3}} \cdot (-2)$$

$$= (3-2x)^{\frac{2}{3}} - \frac{2x}{3(3-2x)^{\frac{2}{3}}} = \dots$$