

Formulas of chapter 2

Exercise : 2.2

Note :

n belongs to power of x	,	f and g are the values
$\frac{d}{dx}(x) = 1$	,	$\frac{d}{dx}(\text{constant}) = 0$

Power rule

$$\frac{d}{dx}(x^n) = nx^{n-1} \frac{d}{dx}(x)$$

Product rule

$$\frac{d}{dx}(f \cdot g) = f \frac{d}{dx}(g) + g \frac{d}{dx}(f)$$

Quotient rule

$$\frac{d}{dx}\left(\frac{f}{g}\right) = \frac{g \frac{d}{dx}(f) - f \frac{d}{dx}(g)}{g^2}$$

Sum or difference rule

$$\frac{d}{dx}(f + g) = \frac{d}{dx}f + \frac{d}{dx}g$$
$$\frac{d}{dx}(f - g) = \frac{d}{dx}f - \frac{d}{dx}g$$

Note : these rules are used in all exercise of chapter 2

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