Math Review

(Partial) Derivatives

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$$4.\ \text{For } a \in \mathbb{R}, \frac{d}{dx}[x^n + a] = \frac{d}{dx}x^n + \frac{d}{dx}a = nx^{n-1} + 0 = nx^{n-1}.$$

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- *Constrained* optimisation problems involve additional conditions to satisfy for the solution.