Positive definite matrix

→ A symmetric ($A = A^T$) matrix is +ve definite if $z^T M z > 0$ for all $z \neq 0$ vectors.

→ ∴ for convex optimization if a function is twice differentiable if its hessian matrix $\left(\frac{\partial f^2}{\partial x 2}\right)$ is +ve definite @point P, then f is convex @ P