

NameSr.#

Q1 Given $f(x) = \frac{5}{3}x^{\frac{2}{3}}(x + 3)$

- a) For which the intervals f is increasing ?Decreasing?
- b) Find local extreme values
- c) For which the intervals f is concave? Concave down?
- d) Find the number of inflection points.

Q2

a) Find $\lim_{x \rightarrow 0} \frac{\sinh x - x}{x^3}$

b) Find $\lim_{x \rightarrow \infty} x^{2^{-x}}$