

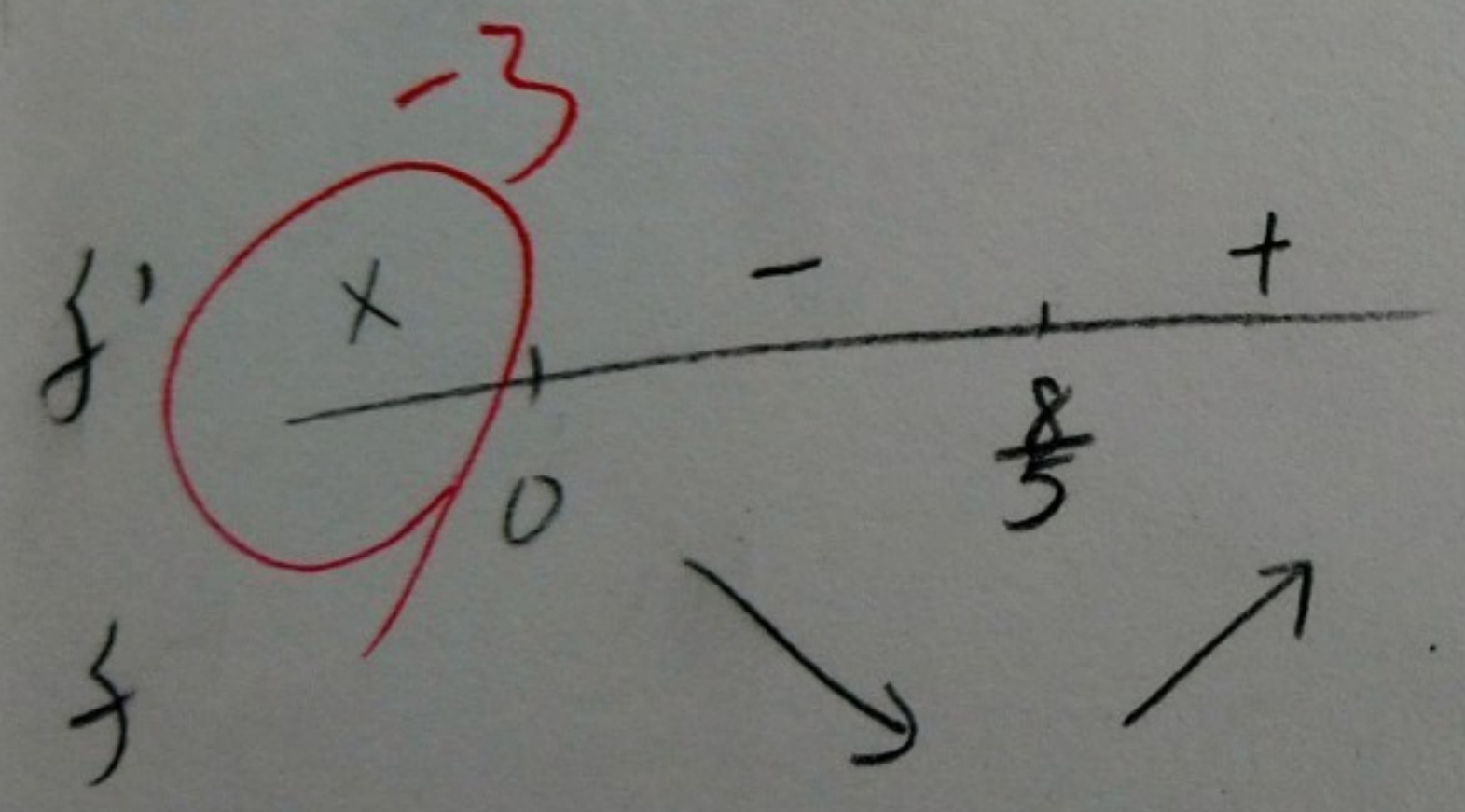
By Rolle's theorem,

$$f'(x) = 0$$

$$3. f(x) = x^{\frac{2}{3}}(x-4) = x^{\frac{5}{3}} - 4x^{\frac{2}{3}}$$

$$f'(x) = \frac{5}{3}x^{\frac{2}{3}} - \frac{8}{3}x^{-\frac{1}{3}} = 0$$

$$x=0 \text{ or } \frac{8}{5}$$



$x = \frac{8}{5} \Rightarrow$  local minimum

$x = 0 \Rightarrow$  local maximum