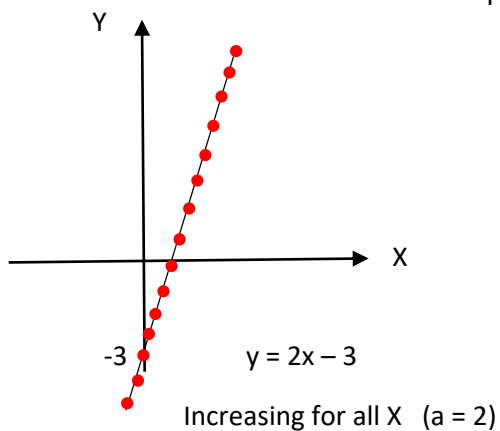


Function $y = f(x)$

(a)



(b)

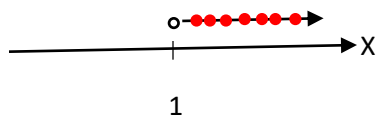
$$y = e^{x^2 - 2x}$$

The Function is increasing for all $X = ?$

$$y' = (2x - 2) e^{x^2 - 2x} > 0$$

$$2x - 2 > 0, \quad 2x > 2$$

$$x > 1$$

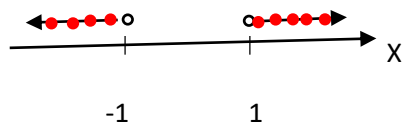


(c)

$$y = e^{\frac{x^3}{3} - x}$$

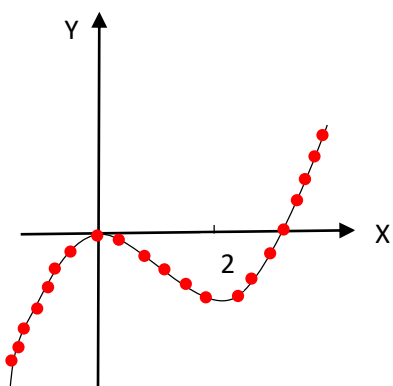
$$y' = (x^2 - 1) e^{\frac{x^3}{3} - x} > 0$$

$$x^2 - 1 > 0, \quad x^2 > 1$$



$$x < -1, \quad x > 1$$

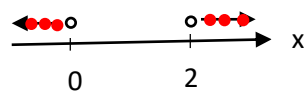
(d)



$$y = \frac{x^3}{3} - x^2$$

$$y' = x^2 - 2x > 0$$

$$x(x - 2) > 0$$



$$x < 0, \quad x > 2$$