2. a $x_{n+1} = -16 + 6x_n + \frac{12}{x_n}$, $\alpha = 2$

$g(x) = -16 + 6x + \frac{12}{x_n}$

I g IS CONTINUOUS ON $[1, 3]$

II $g : [1, 3] \longrightarrow [1, 3]$

III $|g'(x)| = \left|6 - \frac{12}{x^2}\right|$

FOR CONVERGENCE TO α W/ $P_0 \in [1, 3]$

$|g'(1)| < 1$

BUT

$|g'(1)| = |6 - 12| = 6 > 1$

SO $g(x)$ DOES NOT CONVERGE FOR $\forall\, x \in [1, 3]$