

$$\text{For } -\frac{mgl}{I} \leq a \leq \frac{mgl}{I}$$

$$\Rightarrow -18.52 \leq a \leq 18.52$$

$$K_p > \frac{-18.52}{7.11} \quad \text{and} \quad K_p > \frac{18.52}{7.11}$$

$$K_d > 0 \quad \text{and} \quad K_p > -2.6 \quad \text{and} \quad K_p > 2.6$$