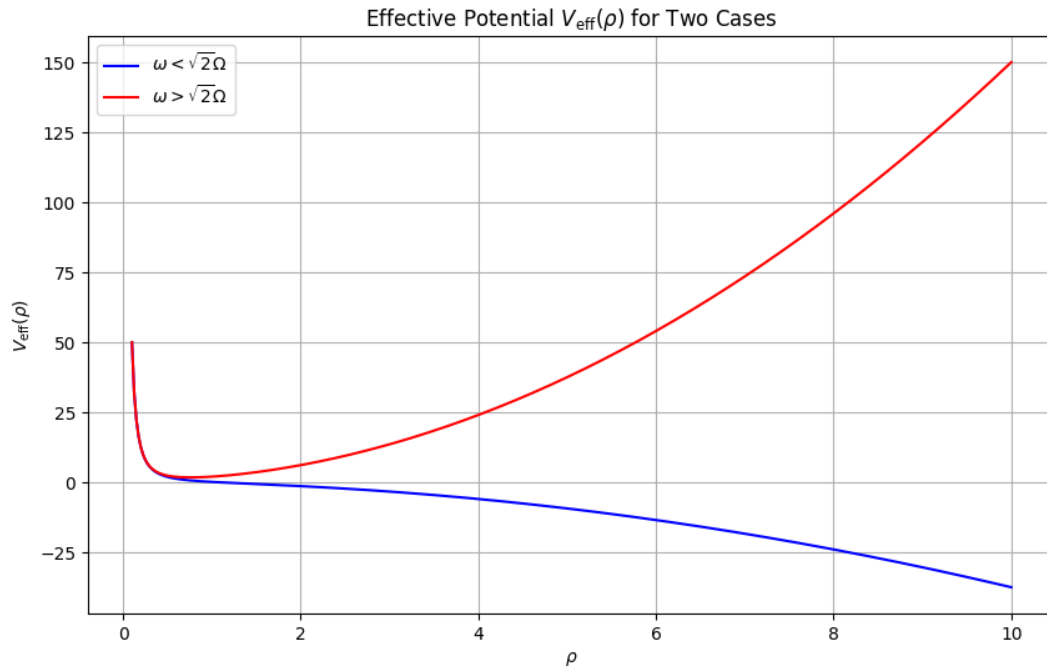


## Problem 1 Plotting



We can see clearly that in the case of  $\omega > \sqrt{2}\Omega$ , there is a local minimum in the effective potential, so it can form an efficient trap.

On the other hand, for  $\omega < \sqrt{2}\Omega$ , there is not a local minimum in the effective potential, so it cannot form an efficient trap.