- Buffers made of mixtures of $H_2PO_4^-$ and HPO_4^{2-} are used to control the pH of soft drinks. What is the pH of a 350 mL drink containing 6.0 g of NaH_2PO_4 and 4.0 g of Na_2HPO_4?

   For phosphoric acid, H_3PO_4, $pK_{a1} = 2.15$, $pK_{a2} = 7.20$ and $pK_{a3} = 12.38$.

Briefly describe how this buffer system functions. Use equations where appropriate.

Is this buffer better able to resist changes in pH following the addition of acid or of base? Explain your answer.