3A) (10 pts) Given the Newman projections below, sketch an energy diagram showing the relative energies of the conformers. Start with $\mathbf{A}$ at $0^{\circ}$ and clearly label your diagram.


3B) (8 pts) In the box provided for each equilibrium, indicate which direction (forward, reverse or neither) is favored and briefly but clearly explain why. No explain = no credit.


