

Quiz 21.1A

- a) A glider carrying a charge of $410\ \mu\text{C}$ is flying through the air in a direction 35° North of East at a rate of $28\ \text{m/s}$. The glider feels a magnetic force of $7.7 \times 10^{-8}\ \text{N}$ directed vertically upward. What is the magnitude and direction of the uniform magnetic field through which the glider is flying, assuming the field is perpendicular to the velocity?
- b) If the glider with the same charge and same velocity as in (a) is moving through a uniform magnetic field of $7.8\ \mu\text{T}$ directed due West, what will be the magnitude and direction of the magnetic force it experiences?