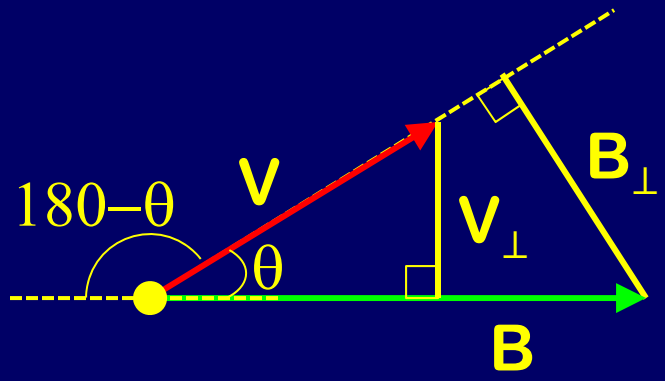
Magnitude of Magnetic Force on Moving Charges

Force depends on magnitude of charge, velocity, and magnetic field

$$F = qvB\sin\theta$$

$$= qv_{\perp}B = qvB_{\perp}$$



Only component of v ⊥ to B (or B ⊥ to v) matters
If v is parallel to B then F = 0

Does not matter whether you use θ or 180 – θ