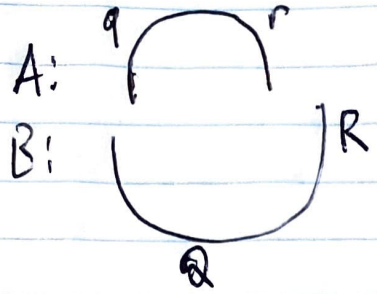
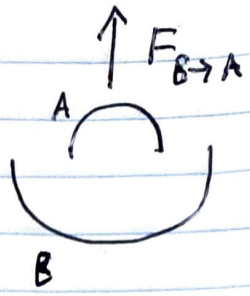
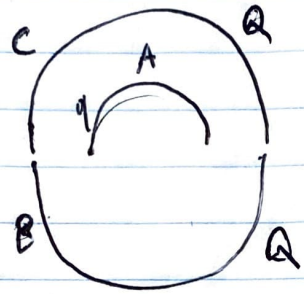


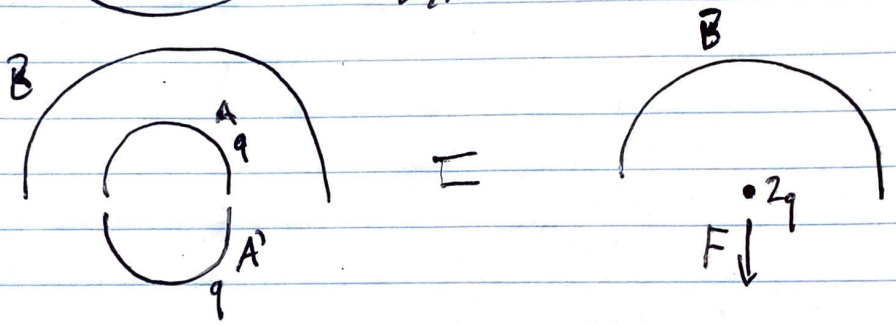
We seek $F_{B\to A}$





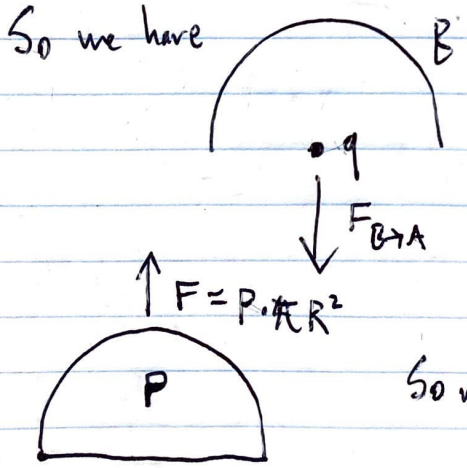
Suppose we flip B over
Then force from B+C on A is zero by shell theorem

$$F_{B\to A} + F_{C\to A} = 0 \Rightarrow F_{C\to A} = -F_{B\to A}$$

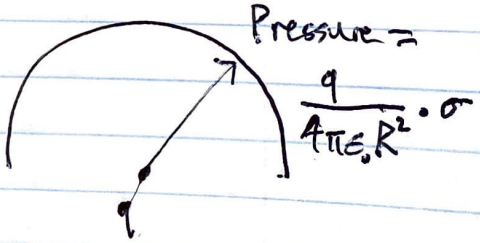


$$F_{B\to A+A'} = F_{B\to A} + F_{B\to A'} = 2F_{B\to A}$$

So we have



This force computable with another trick



So we compute $F_{B\to A} = \dfrac{q\sigma\cdot\pi R^2}{4\pi\epsilon_0 R^2}$

We have $Q = 2\pi R^2\sigma$

$$\boxed{F_{B\to A} = \frac{Qq}{8\pi\epsilon_0 R^2}}$$