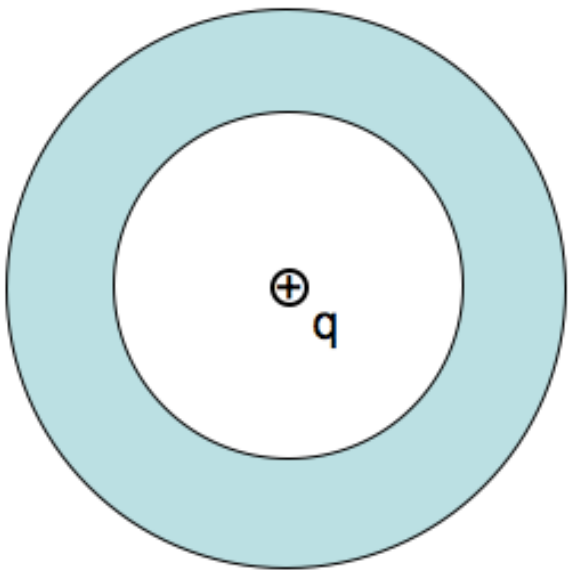
A point charge $+q$ is placed at the center of a neutral, linear, homogeneous, dielectric teflon shell. Can $\mathbf{D}$ be computed from its divergence?



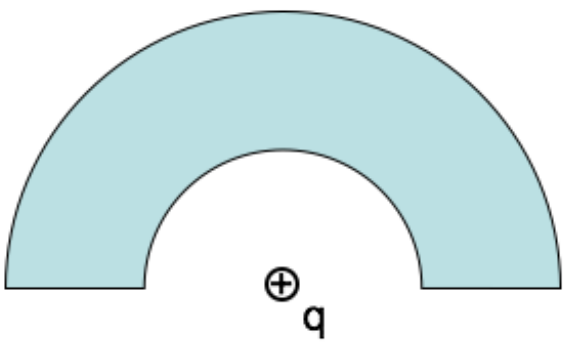
$$\oint \mathbf{D} \cdot d\mathbf{A} = Q_{free}$$

A. Yes

B. No

C. Depends on other things not given

A point charge $+q$ is placed at the center of a neutral, linear, homogeneous, dielectric **hemispherical** shell. Can $\mathbf{D}$ be computed from its divergence?



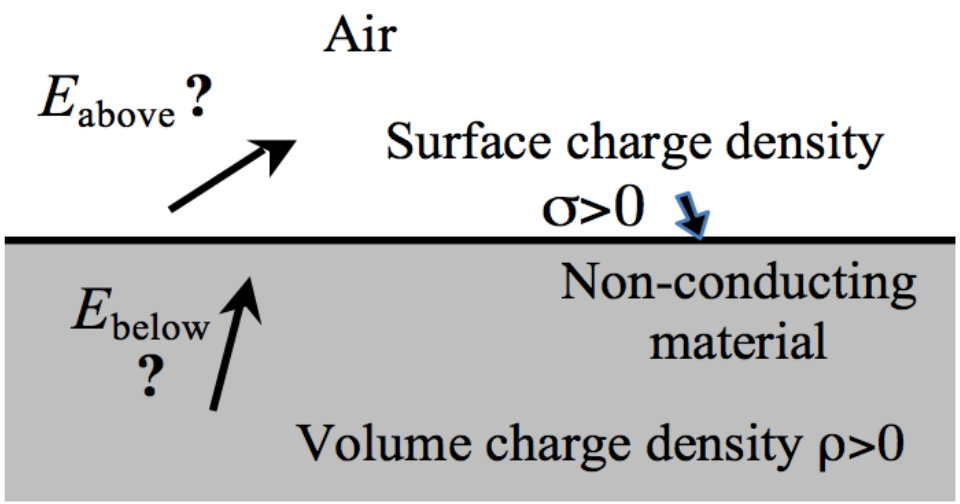
$$\oint \mathbf{D} \cdot d\mathbf{A} = Q_{free}$$

A. Yes

B. No

C. Depends on other things not given

BOUNDARY CONDITIONS



WHY ARE THESE BOUNDARY CONDITIONS USEFUL?