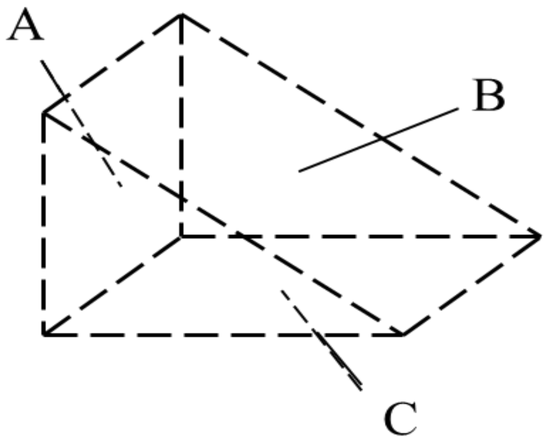
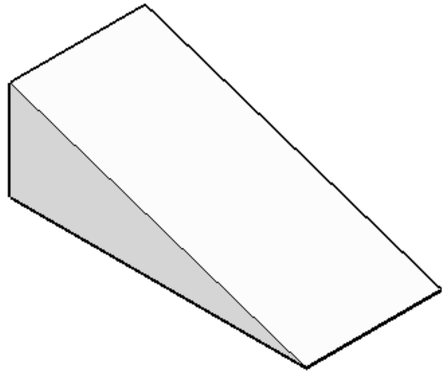
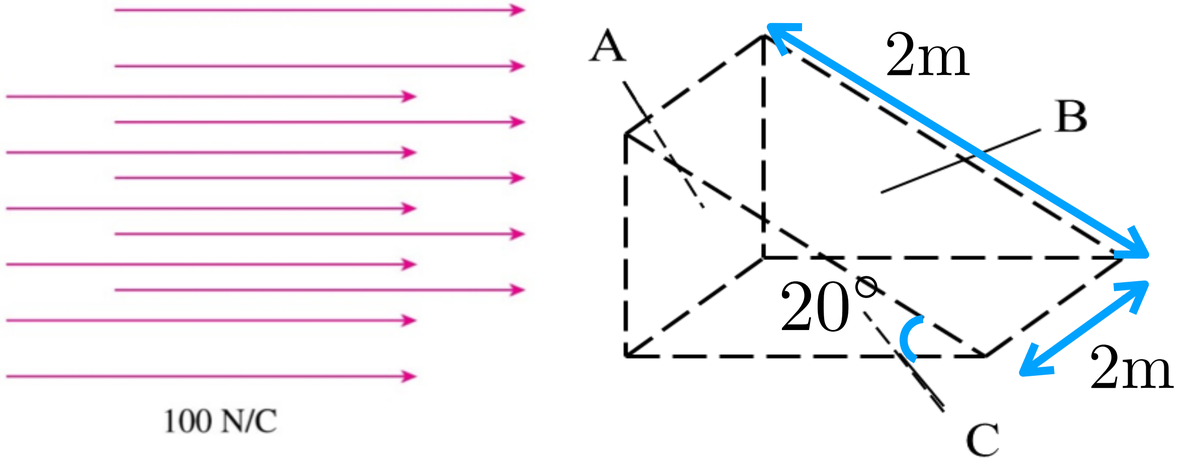
# Q6.3 Draw the area vectors for the prism.
# (A = left side; B = sloped side; C = bottom



# Q6.2d What is the flux through B?




A. 0.

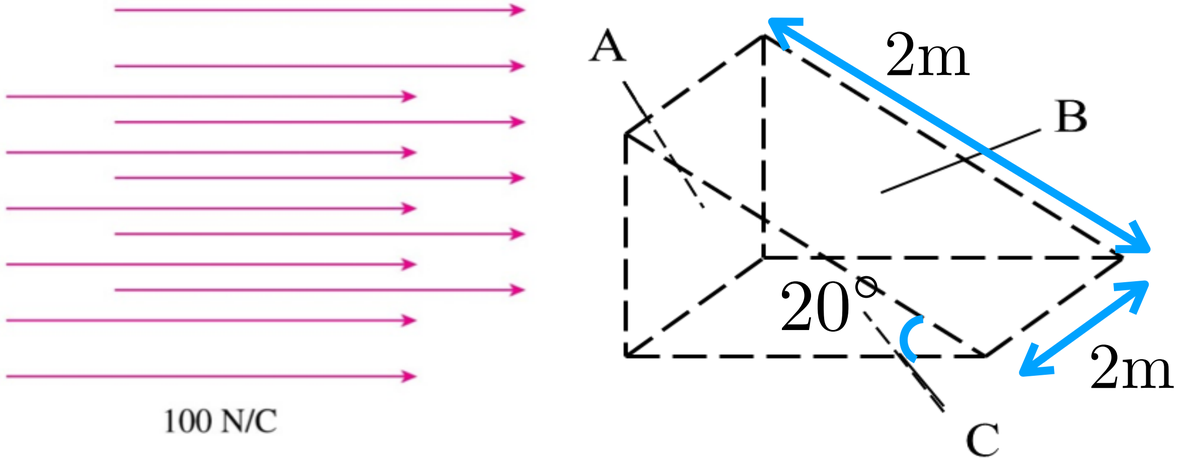
B. 400 cos20° $Nm^2/C$.

C. 400 cos70° $Nm^2/C$.

D. 400 $Nm^2/C$.

E. Some other value.

# Q6.2c What is the flux through the side surface A?




A. 0.

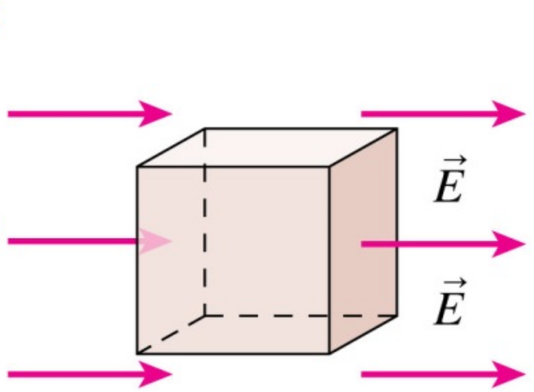
B. 400 cos20° Nm²/C.

C. 400 cos70° Nm²/C.

D. -400 cos70° Nm²/C.

E. -400 cos20° Nm²/C.

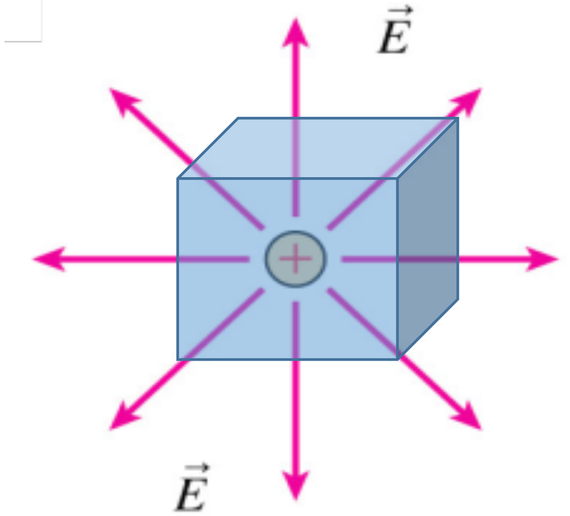
# What is **net electric flux**?




No charge inside the box: number of field lines going in and out of the box is the same.

→ net number of field lines is zero.

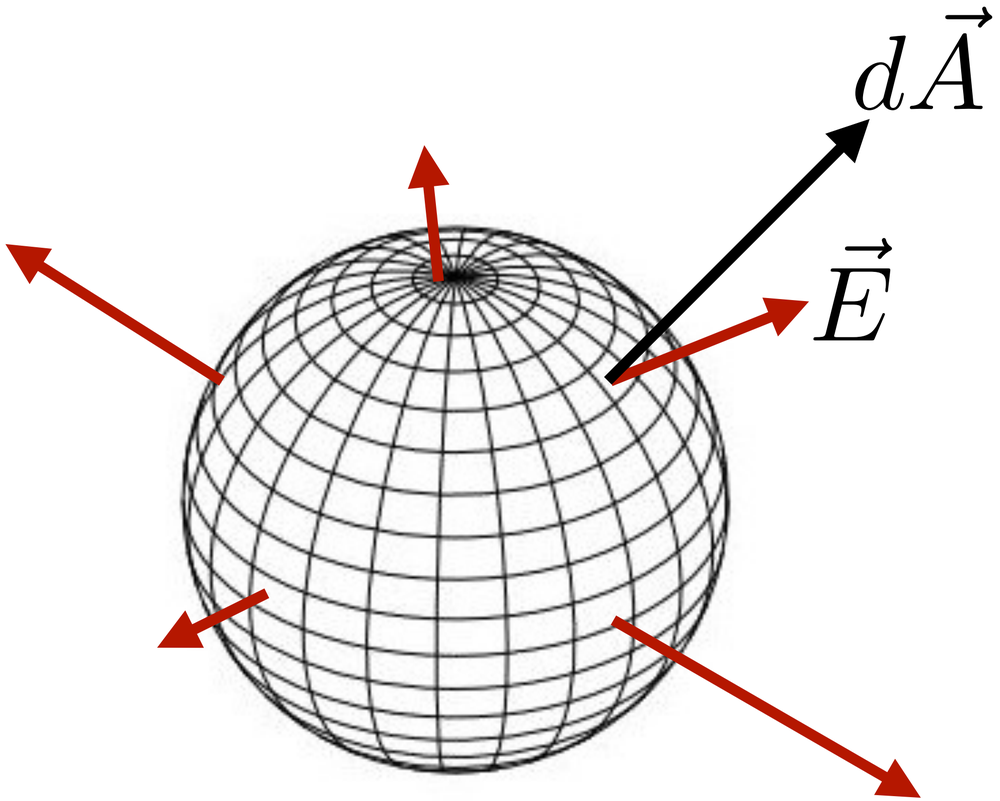
Notice: The electric field is not necessarily zero – it just originates elsewhere.




Point charge inside the box: field lines coming out of the box.

→ the net flux through the surface is positive.

# Electric Flux 3: General case



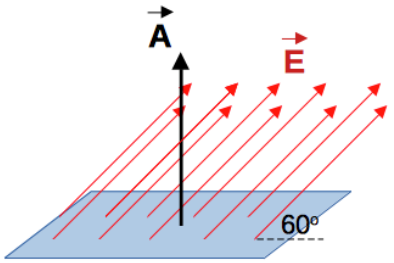

$$\Phi_E = \oint \vec{E} \cdot d\vec{A}$$

Def. “**Gaussian Surface” -** Closed (imaginary/mathematical) surface through which the flux of a vector field is computed

Question:

R3.2

1 point possible (graded)




A uniform electric field is passing through a flat rectangular sheet that is lying in the horizontal plane.

Which is the correct expression for the flux through the sheet of area A?

- $EAsin\,(60)$
- $EAcos\,(60)$
- $EAtan\,(60)$
- $EA$
- $EAcos\,(30)$
- $EAsin\,(30)$