PHY 232 Summer 2016 Class Work Class 6. Applications of Gauss's Law

11111			(a) f
7///			

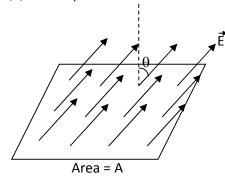
(a) What are the electric flux through surfaces A, B, C, and D:

Ф _А =	
Фв =	
Фс=	
Фр=	

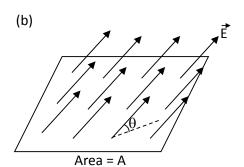
(b) Can you tell the electric field at point P easily from Φ_D ? If yes, what is its value? If not, why?

Write down the electric flux through the surface for each of the following casses:

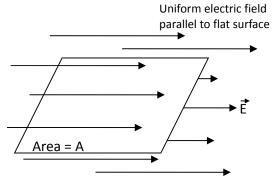
(a) Perpendicular to flat area



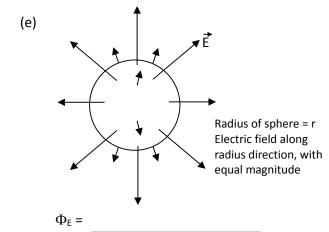
$$\Phi_{\mathsf{E}}$$
 =



(d)



$$\Phi_{\mathsf{E}}$$
 =



Uniform electric field perpendicular to flat surface



(f)

Radius of cylinder = r Length of cylinder = L Electric field along radius direction, with equal magnitude

