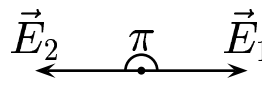
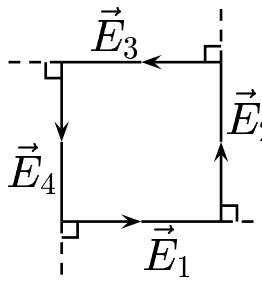


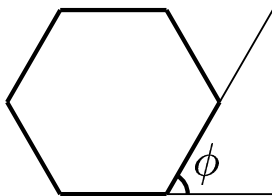
# of slits	1st min. angle	Phasor diagram
2 slits	$\phi_1 = \pi$	
4 slits	$\phi_1 = \frac{\pi}{2}$	
6 slits	$\phi_1 = ?$	

Determine  $\phi_1$  for the 6-slit case.

- A)  $\phi_1 = \frac{\pi}{12}$ .
- B)  $\phi_1 = \frac{\pi}{6}$ .
- C)  $\phi_1 = \frac{\pi}{3}$ .

For number of slits equal to 3 or greater, the first minimum occurs when the polygon is completed. By inspection this occurs in general at  $\phi_1 = \frac{2\pi}{N}$ .

For the present case  $N = 6$ , or  $\phi_1 = \frac{\pi}{3}$



Answer **C**.