

Work by Constant Force

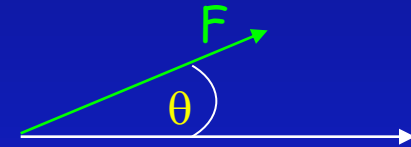
A) $W > 0$

B) $W = 0$

C) $W < 0$

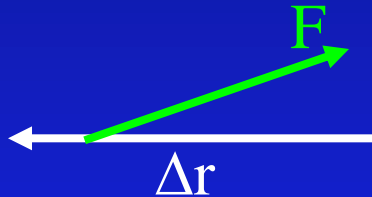
- Only component of force parallel to direction of motion does work!

➤ $W = F \Delta r \cos \theta$



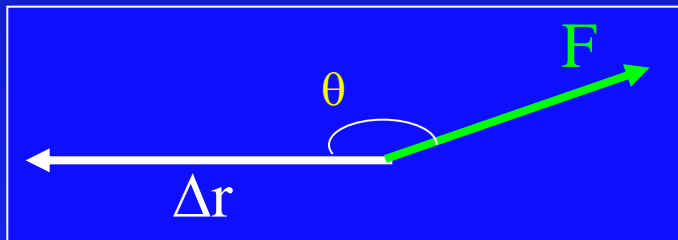
Note Change in r !

1)



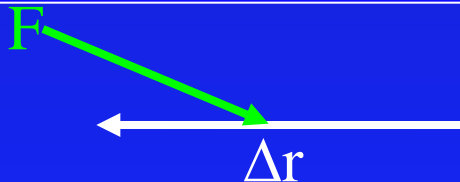
$W_F < 0: 90 < \theta < 180 : \cos(\theta) < 0$

2)



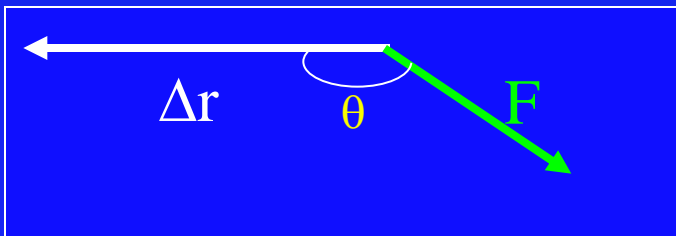
$W_F = 0: \theta = 90 : \cos(\theta) = 0$

3)



$W_F < 0: 90 < \theta < 180 : \cos(\theta) < 0$

4)



$W_F > 0: 0 < \theta < 90 : \cos(\theta) > 0$