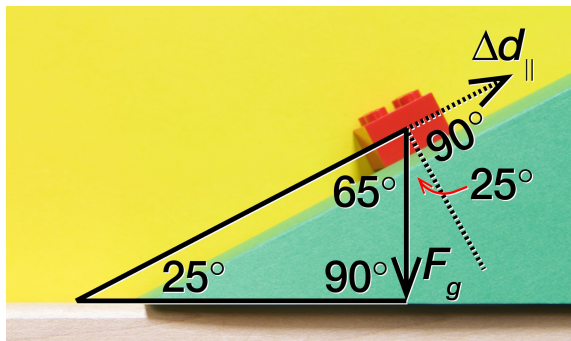Flipping Physics Lecture Notes:

Work due to the Force of Gravity on an Incline
by Billy

This is a continuation of a previous video done by Billy. Please view that video before attempting this one. http://www.flippingphysics.com/coe-incline-problem.html

Find the work done by the force of gravity.

On the level surface: $W_{F_g} = F_g d \cos\theta = (mg)d\cos\theta = mgd\cos(90) = 0$

On the incline:

$W_{F_g} = F_g d \cos\theta = (mg)\Delta d_{\parallel} \cos(90 + 25) = (0.011)(9.81)(0.095644)\cos(115)$

$\Rightarrow W_{F_g} = -0.0043618J \times \dfrac{1000mJ}{J} \approx \boxed{-4.4mJ}$