

Lab Data

Out:	$\theta = 15^\circ$	$\theta = 40^\circ$
$F_{out} (= F_w)$		same as for 15° trial
$d_{out} (= \text{height})$		

In:	$\theta = 15^\circ$	$\theta = 40^\circ$
$d_{in} (= \text{length})$		same as for 15° trial
$F_{in} (= F_a)$		

Lab Calculations

Copy calculations from video here.

Do your own calculations here.

$W_{out} = F_{out} \times d_{out}$		
$W_{in} = F_{in} \times d_{in}$		

	$\theta = 15^\circ$	$\theta = 40^\circ$
$M.A. = \frac{F_{out}}{F_{in}}$		
$Eff = \frac{W_{out}}{W_{in}} \times 100$		

Conclusions:

1. As mechanical advantage (increases, decreases), a machine becomes easier to use. Which inclined plane had the best mechanical advantage?

2. Which inclined plane was the most efficient?

3. As machines become easier to use, what happens to their efficiency?

Explain.