TT hatch calculation

Second Class Lever

Input Information

mechanical advantage of a lever		
effort arm	1 meter	
load arm	20 cm (centimeters)	
lever type	second class	

Equation

$$MA = \frac{d_1}{d_2}$$

MA   mechanical advantage

d_1 effort arm

d_2 load arm

Result

mechanical advantage   5

Third Class Lever

Input Information

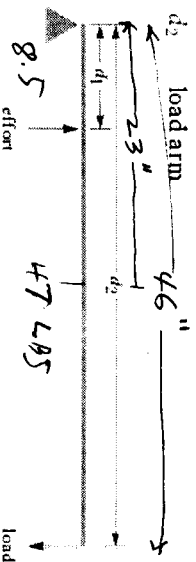|		
mechanical advantage of a lever		
effort arm	1 meter	
load arm	20 cm (centimeters)	
lever type	second class	

Equation

$$MA = \frac{d_1}{d_2}$$

MA   mechanical advantage

d_1 effort arm

d_2 load arm

Result

mechanical advantage   0.2

#1 = $\frac{8.5}{23}$ = .36957 | $\frac{47\ LBS}{.36957}$ = 127.18 +107 = 139.88 LBS Total

or

#2 $\frac{8.5}{46}$ = .18478 | $\frac{27.5\ LBS}{.18478}$ = 127.18 +107 = 139.88 LBS total