Window propped open by
stick CD
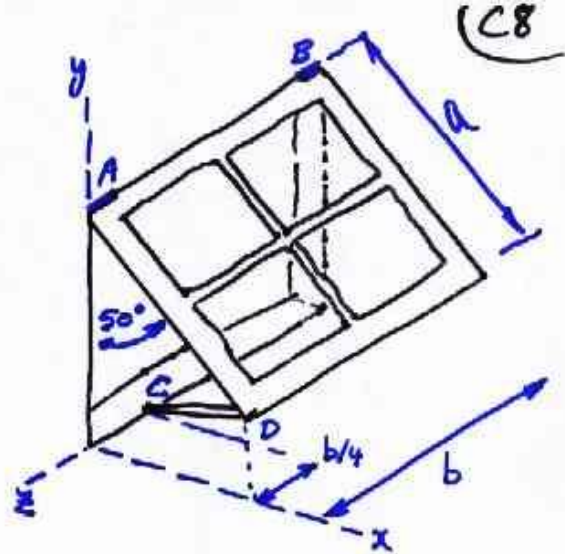
$a = 0.8 \text{ m}$

$b = 1.2 \text{ m}$

mass = 50 kg @ geometric centre

HINGES @ A & @ B

→ A supports thrust

→ B DOES NOT.

find compressive force F_{CD} in prop
& ALL components of forces in hinges @ A & B

F.B.D.
  MOST IMPORTANT STEP

need to get components
  of $\vec{F}_{CD}$

UNit vector $\parallel$ to $\vec{F}_{CD}$ ...

from $C \rightarrow D$ $a \sin(50°)\hat{\imath} + a(1 - \cos(50°))\hat{\jmath} + \frac{b}{4}\hat{k}$

i.e. $0.613\,\hat{\imath} + 0.286\,\hat{\jmath} + 0.3\,\hat{k}$

to get unit vector $\div$ by $\sqrt{0.613^2 + 0.286^2 + 0.3^2}$

$$= 0.740$$

$\Rightarrow \vec{F}_{CD} = \parallel F_{CD} \parallel \left(0.828\,\hat{\imath} + 0.386\,\hat{\jmath} + 0.405\,\hat{k} \right)$