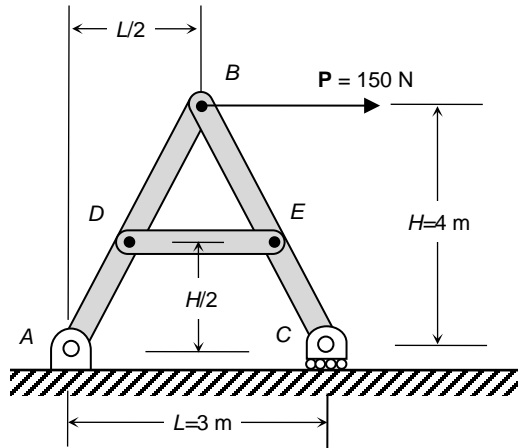


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### Example

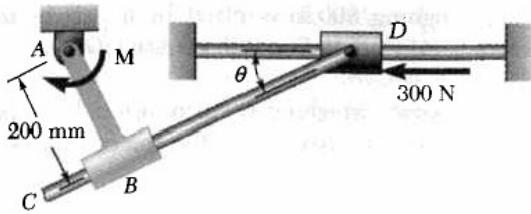
The A-frame in the figure is subjected to a force of  $P=150\text{ N}$  as shown in the figure. Assuming massless members, find the reactions at  $A$  and  $C$  and the pin reactions at  $D$  and  $B$ .



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### Example

The figure below shows what is known as a slider-crank mechanism, a machine that changes rotational motion into translational motion, or *vice versa*. If the angle  $\theta=30^\circ$ , find the required moment that must be supplied at  $A$  in order to maintain equilibrium.



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### Example

Tongs are used to lift a barrel weighing 60 lb as shown in the figure. If  $a=5$  in, find the forces exerted on the tongs at both  $C$  and  $D$ .

