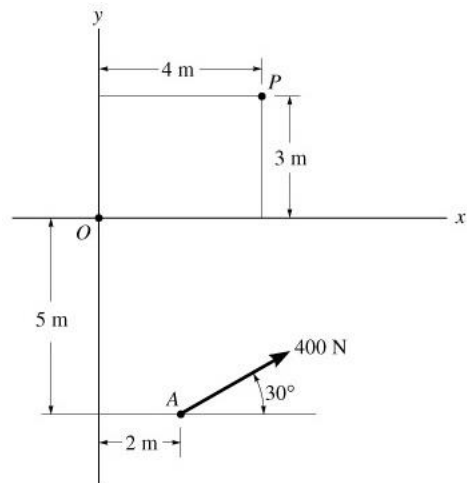



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Determine the directional sense and the magnitude of the resultant moment about the origin by scalar analysis and vector analysis.

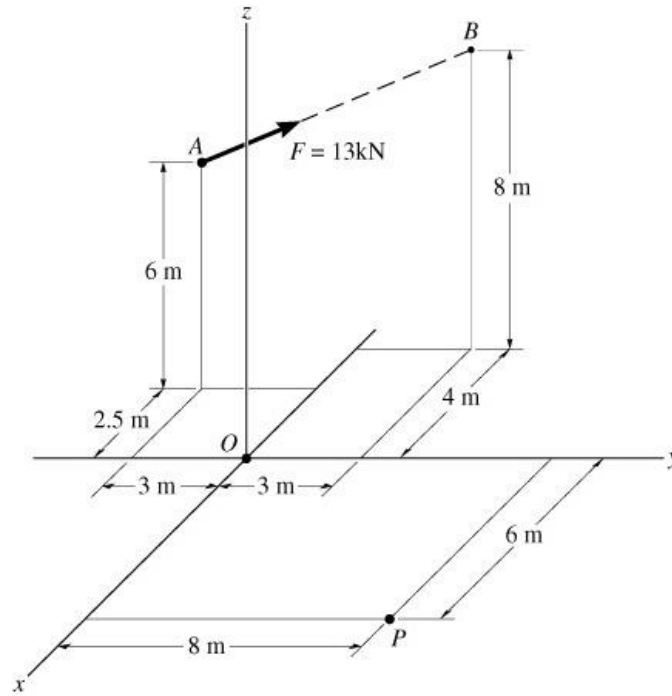
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Determine the magnitude and direction of the moment of force about point  $O$  and then find the magnitude and direction of the moment of force about point  $P$ .

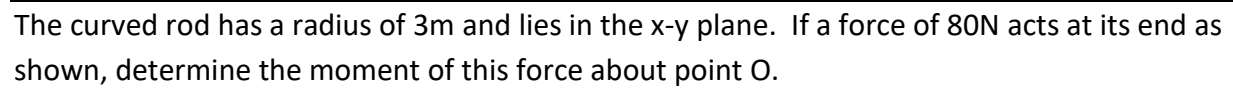
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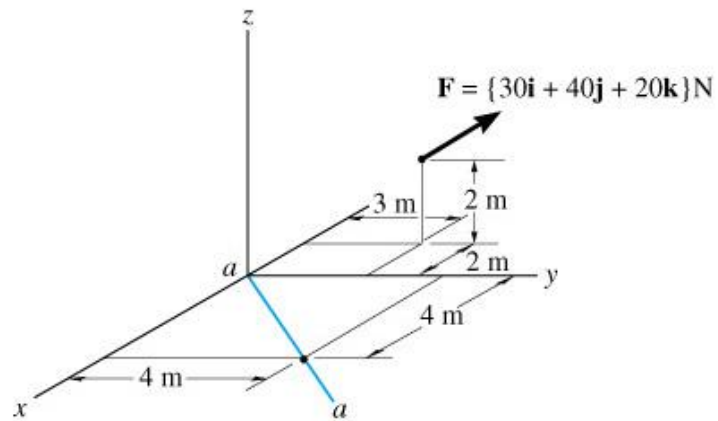



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Determine the moment of the force  $F$  about point  $P$ . Express the answer as a Cartesian vector.

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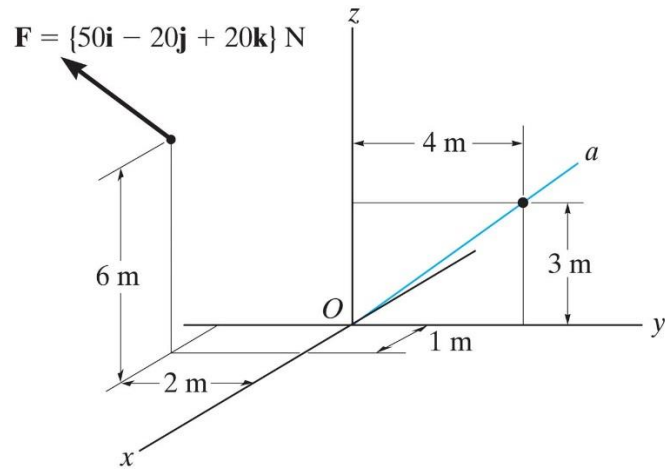





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Take the moment of force  $\mathbf{F}$  about the  $aa$  axis (starting at the origin and going toward point  $a$ ) and express it in Cartesian vector form.

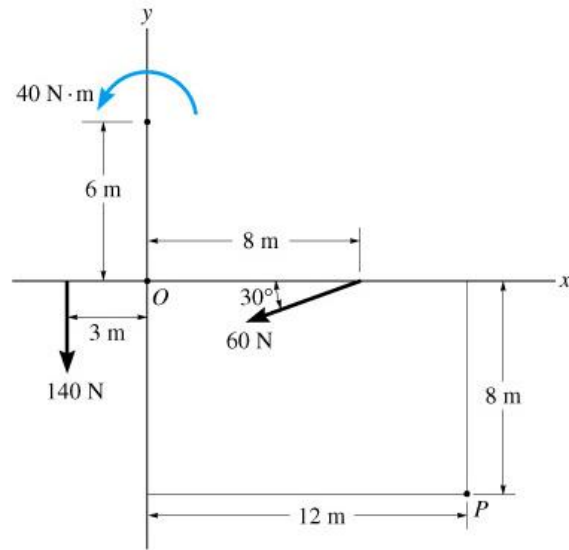
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Determine the moment created by the force about the  $Oa$  axis. Express your answer as a Cartesian vector.

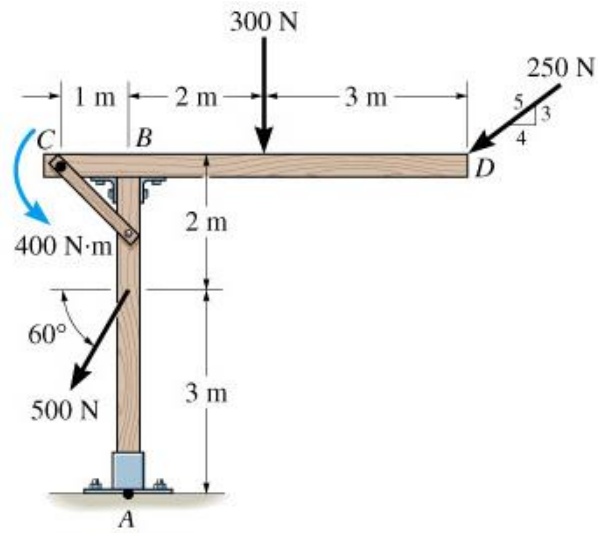
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Find the equivalent force and moment of the system acting at point  $P$ .

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Replace the loading on the frame with a resultant force and specify where its line of action intersects member CD, measured from C.

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