A rod is pushed by an engineer with force magnitudes of F_B and F_C. Find the total moment formed about point A as a result of F_B and F_C. Assume that the rod pivots about point A.

What are the magnitudes and directions of the moment vectors formed by F_B and F_C about point A?

$|M_{AB}| = d_1 F_B \cos(\theta_B)$

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$|M_{AC}| = (d_1 + d_2) F_C \cos(\theta_C)$

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What is the magnitude of the total moment formed about point A by the engineer?

$|M_{A\,Total}| = |M_{AB}| + |M_{AC}|$