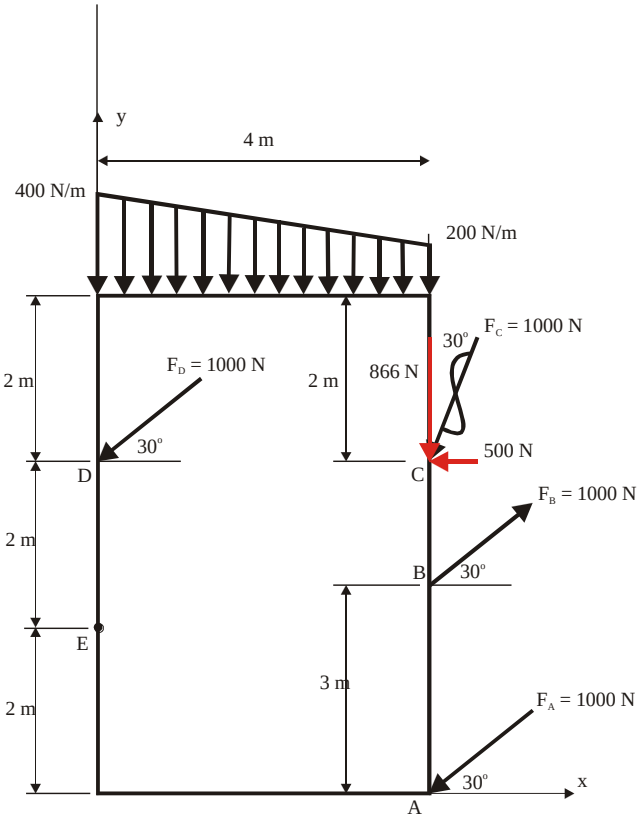
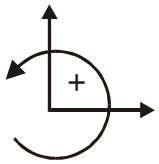
Print Name: _____

Student Number: _____





$\mathbf{F_A}$ = (_____) or

$\mathbf{F_B}$ = (_____) or

$\mathbf{F_C}$ = (- 500**i** - 866 **j**) or (500←, 866↓)

$\mathbf{F_D}$ = (_____) or

Find the moments about E by **resolving the forces into horizontal and vertical components**. Show the components at A, B, and D as done for $\mathbf{F}_C$ above.

(i) $\mathbf{M_E}$ due to F_A : _____

(ii) $\mathbf{M_E}$ due to F_B : _____

(iii) $\mathbf{M_E}$ due to F_C : -866 * 4 + 500 * 2 = -2464 N.m = 2464 N.m ↻

(iv) $\mathbf{M_E}$ due to F_D : _____

(v) $\mathbf{M_E}$ due to Distributed Load : _____

(vi) **(EQUIVALENT FORCE-COUPLE AT E)**

$\mathbf{R_x} = \sum F_x$ = Equivalent translation in x – direction at E = _____

$\mathbf{R_y} = \sum F_y$ = Equivalent translation in y – direction at E = _____

$\mathbf{M_E}$ due to F_A, F_B, F_C, F_D and the Distributed Load acting together which is equivalent rotation effect at E
[add (i), (ii), (iii), (iv) and (v)] _____

(vii) What is the Equivalent Force-Couple at C: $\mathbf{R_x}$ = _____, $\mathbf{R_y}$ = _____, $\mathbf{M_C}$ = _____