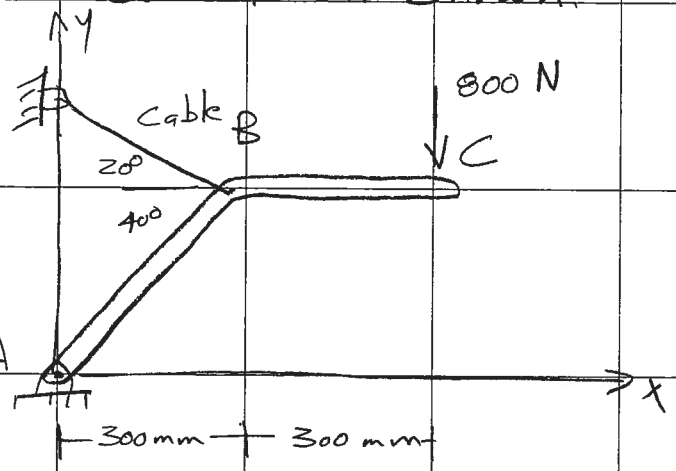
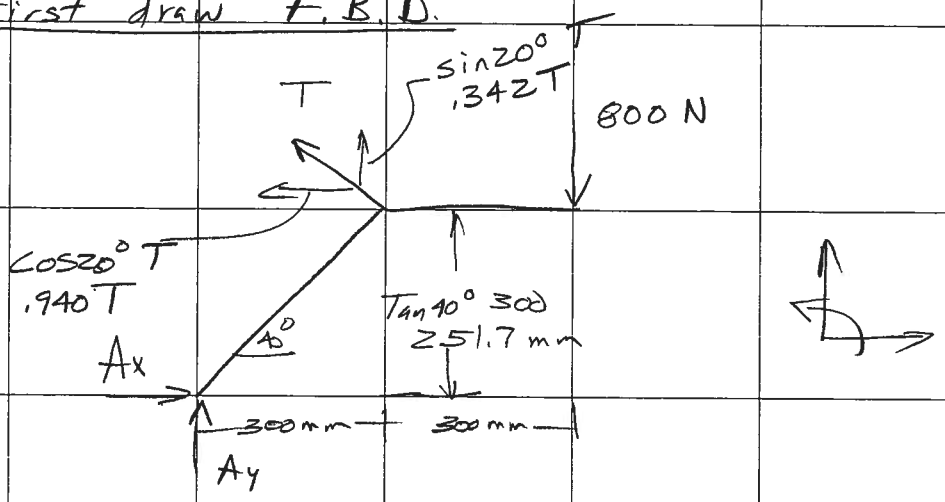
Determine the force exerted by the cable at B and the reaction at support A for the curved bar shown.



First draw F.B.D.



Write Scalar Equations of Equilibrium

(+) $\sum M_A = 0$

(1) $.342T(300) + .940T(251.7) - 800(600) = 0$

(2) $339.2T = 480\,000$

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(3) $T = 1415.1\ N \uparrow$ as shown

$\overset{+}{\rightarrow}\ \Sigma F_x = 0$

(4) $A_x - .940T = 0$ (1415.1)

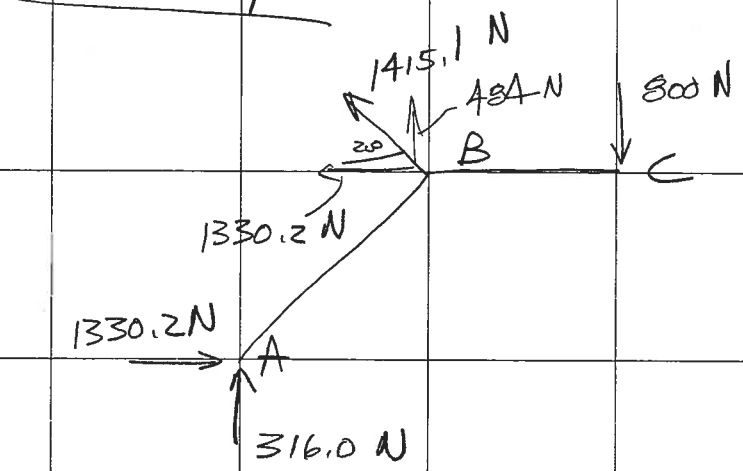
(5) $A_x = 1330.2\ N \rightarrow$ as shown

$+\uparrow\ \Sigma F_y = 0$

(6) $A_y + .342T - 800 = 0$ (1415.1)

(7) $A_y = 316.0\ N \uparrow$ as shown

Summary



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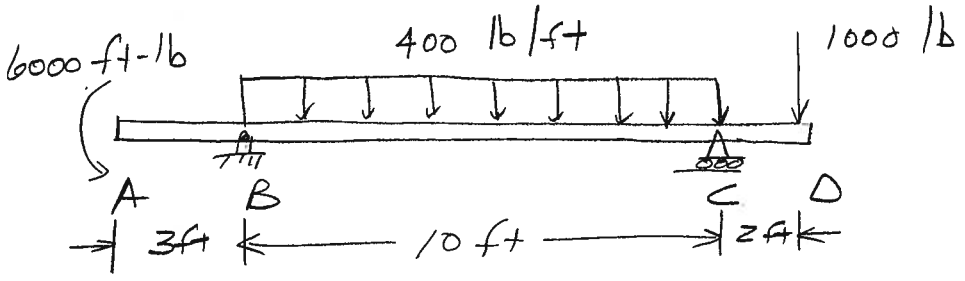
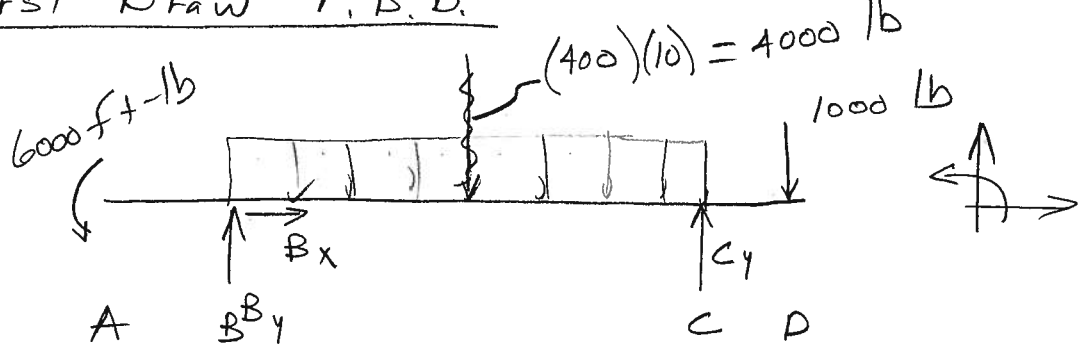
A beam is loaded as shown. Determine the reactions at supports B and C.



First Draw F.B.D.



Write Scalar Equations of Equilibrium

$$\circlearrowleft + \sum M_B = 0$$

$$+6000 - 4000(5) + C_y(10) - 1000(12) = 0$$

$$C_y = \frac{1000(12) + 4000(5) - 6000}{10}$$

$$C_y = 2600 \text{ lb} \uparrow \text{ as shown}$$

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$$+\uparrow \sum F_y = 0$$

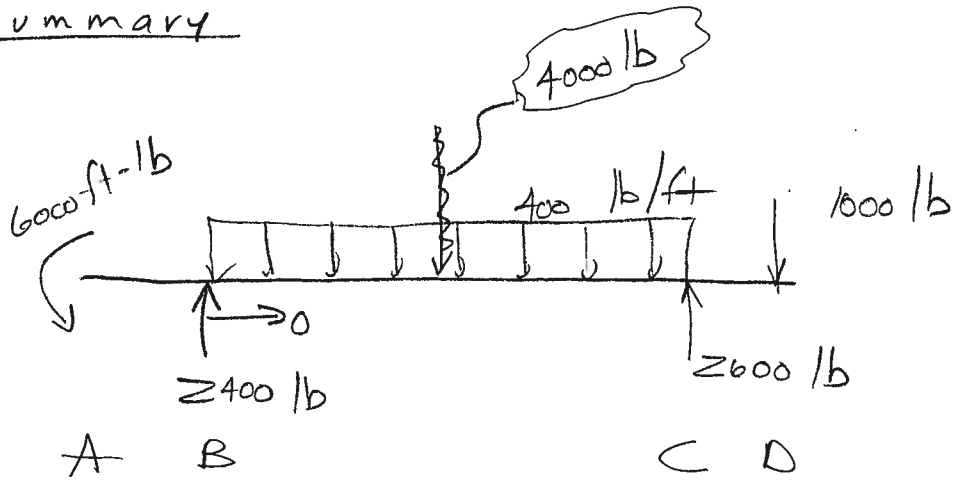
$$+ B_y - 4000 + 2600 - 1000 = 0$$

$$B_y = 2400 \text{ lb} \uparrow \text{ as shown}$$

$$+\rightarrow \sum F_x = 0$$

$$B_x = 0$$

Summary



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