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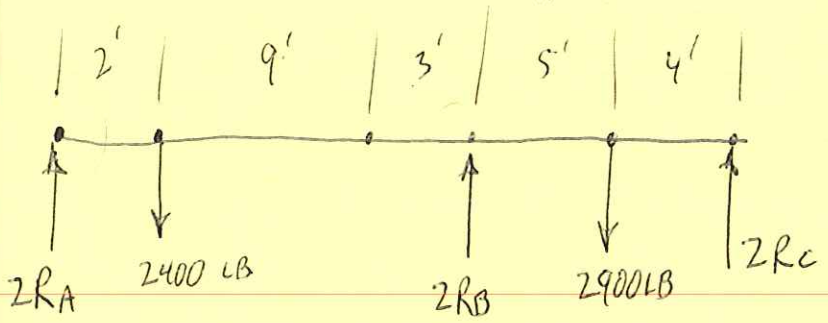
ENTIRE VEHICLE



$\Sigma F_Y = 0$: $2R_A + 2R_B + 2R_C = 2400 + 2900$

$R_A + R_B + R_C = 2650$ EQN. (1)

$\Sigma M_A = 0$: $+\circlearrowleft$

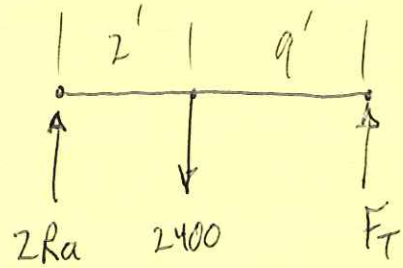
$-(2\text{ ft})(2400\text{ LB}) + (14)(2R_B) - (19)(2900) + (23)(2R_C) = 0$

$28R_B + 46R_C = 60000$

$14R_B + 23R_C = 30000$ EQN. (2)

NOT ENOUGH INFO TO SOLVE.

a) TRAILER:



$\Sigma F_Y = 0$: $2R_A + F_T = 2400$ EQN. (3)

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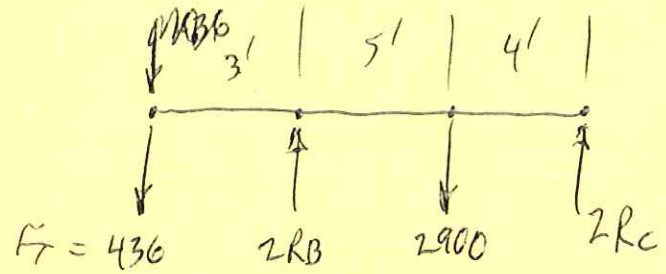
$\Sigma M_A = 0 \quad +\circlearrowleft :$

$-(2\text{ ft})(2400\text{ LB}) + (11)F_T = 0$

$F_T = 436\text{ LB}$

$R_A = \frac{1}{2}(2400 - 436) = 982\text{ LB}$

TRUCK:



$\Sigma F_y = 0$

$2R_B + 2R_C = 436 + 2900$

$R_B + R_C = 1670$

$\Sigma M_C = 0 \quad +\circlearrowleft :$

$(12')(436\text{ LB}) - (9)(2R_B) + (4)(2900) = 0$

$R_B = 935\text{ LB}$

$R_C = 735\text{ LB}$

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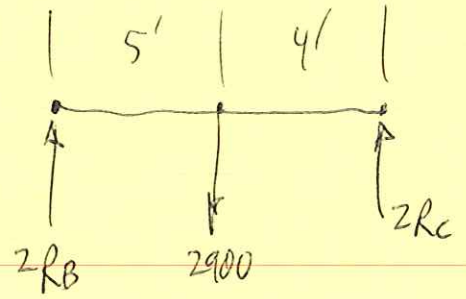
b) REMOVE TONGUE WEIGHT.



$\Sigma F_y = 0$:

$R_B + R_C = 1450$

$\Sigma M_B = 0$ +↑:

$-(5)(2900) + (9)(2R_C) = 0$

$R_C = 805$ LB

$R_B = 644$ LB

ADDITIONAL ON B: $935 - 644 = 290$ LB

ADDITIONAL ON C: $735 - 805 = -70$ LB