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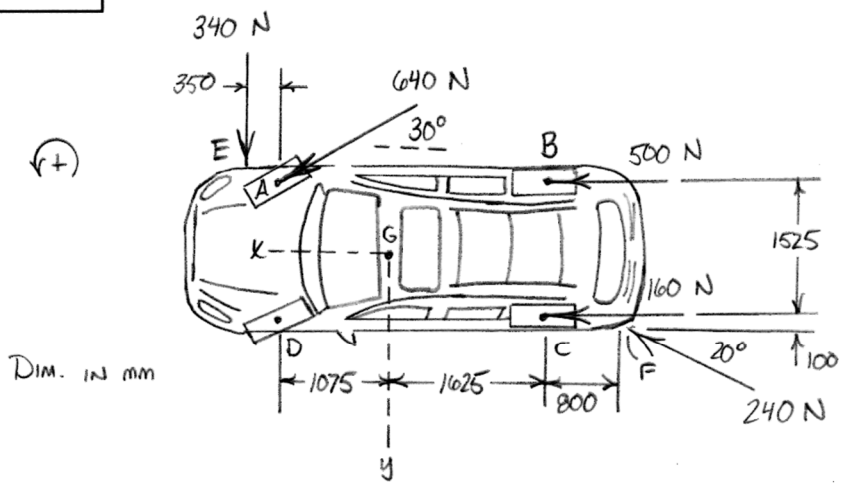

$$\underline{R} = (500 + 640\cos 30^\circ + 240\cos 20^\circ + 160)\underline{i} + (640\sin 30^\circ + 340 - 240\sin 20^\circ)\underline{j}$$

$$\underline{R} = 1440\underline{i} + 578\underline{j}\ \text{N}$$

$$\Sigma M_G = \frac{1.525}{2}(500 - 160 + 640\cos 30^\circ) + 340\left(\frac{1075+350}{1000}\right) + \frac{1075}{1000}(640\sin 30^\circ)$$
$$+ \frac{1625+800}{1000}(240\sin 20^\circ) - \left(\frac{1525/2}{1000} + \frac{100}{1000}\right)(240\cos 20^\circ) = 1515\ \text{N·m CCW}$$

FOR CCW M_G WITH POSITIVE R_x, R_x IS IN NEGATIVE y, ABOVE G.

$R_x|y| = M_G \rightarrow 1440|y| = 1515 \rightarrow |y| = 1.052\ \text{m}$ SO... $\underline{(0, -1.052)\ \text{m}}$

FOR CCW M_G WITH POSITIVE R_y, R_y IS IN POSITIVE x, LEFT OF G.

$R_y x = M_G \rightarrow 578x = 1515 \rightarrow x = 2.62\ \text{m}$ SO... $\underline{(2.62, 0)\ \text{m}}$