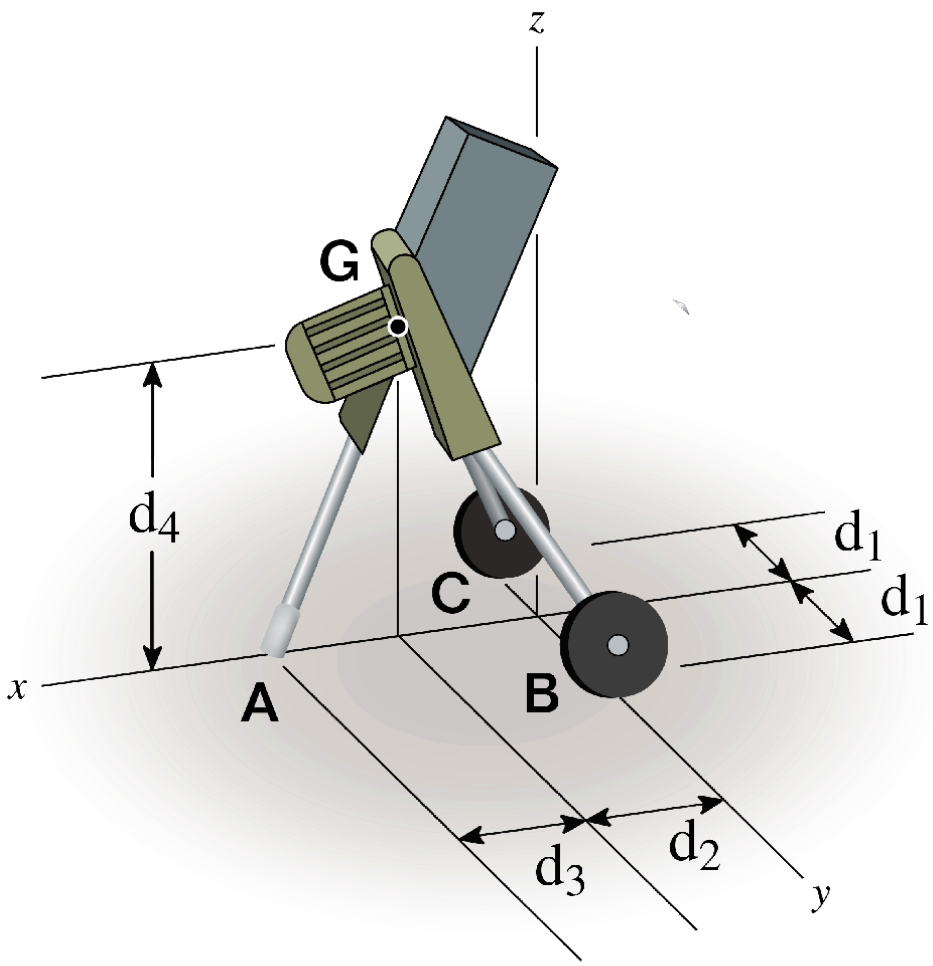

A mulching machine with center of gravity G has a total weight of W lbs and is supported by two wheels at B and C and a smooth contact point at A. Determine the vertical support reactions.

$\Sigma(M_x)_A = 0 \rightarrow d_1 N_B - d_1 N_C = 0 \rightarrow N_B = N_C$

$\Sigma(M_y)_B = 0 \rightarrow d_2 W - (d_2 + d_3) N_A = 0 \rightarrow N_A = \dfrac{d_2}{d_2 + d_3} W$

$\Sigma F_z = 0 \rightarrow N_A + N_B + N_C - W = 0 \rightarrow N_B = N_C = \dfrac{W - N_A}{2}$