

Answer on Question #55449, Physics / Other

Task: A (light) pallet has a load of cases of tomato paste each of which is a cube of length L and has identical mass. Find the center of gravity in the horizontal plane, so that the crane operator can pick up the load without tipping it. (Use the following as necessary: L , measured from the back left corner.)

Answer: from left = $1.2 L$, from back= $0.9L$

$$5x = 3(L-x) + 2(2L-x)$$

$$x = 0.7 L$$

$$\text{Distance from left} = 1.2 L$$

$$7y = 2(L-x) + 1(2L-x)$$

$$y = 0.4 L$$

$$\text{Distance from back} = 0.9 L$$

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