

University Physics 1A

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Center of Mass

With two masses, the center of mass can be calculated as:

$$x_{CoM} = \frac{m_1x_1 + m_2x_2}{m_1 + m_2}$$

This formula can be generalized with n masses as:

$$x_{CoM} = \frac{\sum_{i=1}^n m_i x_i}{\sum_{i=1}^n m_i}$$

In two dimensions with points $(x_1, y_1), (x_2, y_2), \dots, (x_n, y_n)$:

$$x_{CoM} = \frac{\sum m_i x_i}{\sum m_i}$$

$$y_{CoM} = \frac{\sum m_i y_i}{\sum m_i}$$

You can find all my notes at <http://omgimanerd.tech/notes>. If you have any questions, comments, or concerns, please contact me at alvin@omgimanerd.tech