**Harold’s Center of Mass**

**Cheat Sheet**

13 August 2020

**Terms**

|  |  |  |
| --- | --- | --- |
| **Term** | **Description** | **Units** |
|  | Center of Mass along the x-axis. Same as . |  |
|  | Center of Mass along the y-axis. |  |
|  | Center of Mass along the z-axis. |  |
|  | Center of Mass. The coordinates (point) where the object is perfectly balanced. (Centroid) |  |
|  | Total mass. How heavy the object is. Is equal to it’s area or volume if uniform density. (similar to Weight) |  |
|  | Moment. The line or axis on which the object can spin perfectly balanced. |  |
|  | Moment of Inertia about the x-axis |  |
|  | Moment of Inertia about the y-axis |  |
|  | Moment of Inertia, mass moment of Inertia, or rotational inertia of a body. polar moment of inertia (about origin) |  |
|  | Greek symbol rho for density or mass / volume or mass / area. |  |
|  | Area of lamina or plate |  |
|  | Volume of a body or solid |  |
| How to Find the Center of Mass of a Cone - Video & Lesson ... | | |

**Discrete**

|  |  |  |  |
| --- | --- | --- | --- |
| **Term** | **1-D** | **2-D** | **3-D** |
|  |  |  |  |
|  | NA |  |  |
|  | NA | NA |  |
|  |  | | |
|  |  | | |
|  |  | | |
|  |  |  | NA |
|  |  |  |  |
|  | NA |  |  |
|  | NA | NA |  |
|  |  |  |  |
|  | | | |

**Continuous**

|  |  |  |
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| **Term** | **2-D** | **3-D** |
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|  |  |  |
|  | NA |  |
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|  |  |  |
|  | NA |  |
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|  |  |  |
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