

Cardboard Boat Mock-up Calculations

Steps in Calculating Weight

- Determine your weight in grams, using the following formula. Create a similar weight out of nut/bolts... to simulate your weight being placed into the boat. This will let you know how stable your boat will be.

Formula: $(\text{Your Weight in LBS} \times (2.54)^3) / 62.4$

Example (100 lbs x $(2.54)^3$) / 62.4 = 26.3 grams

- Determine the maximum amount of weight that your boat will be able to hold. You will do this by determining the displaced volume of water. Fill the boat with water then pour the water into a cup and weigh it in grams. Use the following formula:

Formula: $(\text{Measured Weight in grams} / (2.54)^3) \times 62.4$

Example (40 Grams / $(2.54)^3$) x 62.4 = 152.3 LBS

Evaluation

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| 1) Show personal weight calculation | [2] |
| 2) Written notes describing how each boat performed | [9] |
| 3) Calculations for maximum weight each boat projected to hold | [6] |
| 4) Which one are you choosing and why compared to others | [3] |

Total /20