Density Mystery Boxes

Due Date: \_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

There are five boxes (**violet, yellow, navy, blue and black**). Each box has a different mass (**82.0g, 65.0g, 81.0g, 19.0g, 71.0g**) and a different volume (**60.0 cubic cm, 25.0 cubic cm, 162.0 cubic cm, 61.0 cubic cm and 24.0 cubic cm**).

**Figure out the Mass, Volume, and Density of each object using the following clues:**

* The blue object has a volume of 60 cubic cm and a density of 1.367 grams per cubic cm.
* The blue object has a greater mass than the yellow object.
* The density of water is 1.0grams per cubic cm. If the navy object was placed in water, it would sink.
* The density of aluminum is 2.7 grams per cubic cm. The black object is denser than aluminum.
* The black object has a greater density than the navy object.
* The density of water is 1 gram per cubic cm. If the yellow object was placed in water, it would float.
* The volume of the black object is not 61 cubic cm and it is also not 25 cubic cm.
* One object has a volume of 61.0 cubic cm and a density of 1.066 grams per cubic cm.
* The violet object has a volume of 162 cubic cm and a mass of 81 g.
* The volume of the navy object is not 25 cubic cm.
* One object has a volume of 25 cubic cm and a density of 0.76 grams per cubic cm.

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| --- | --- | --- | --- |
| Box Color | Mass | Volume | Density |
| Violet |  |  |  |
| Yellow |  |  |  |
| Navy |  |  |  |
| Blue |  |  |  |
| Black |  |  |  |