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Density Practice- Due Friday 9/18- Show your work to earn full credit!

1. What is the [density](javascript:def('/Glossary/glossaryterm.aspx?word=Density',%20500,%20500);) of a piece of wood that has a [mass](javascript:def('/Glossary/glossaryterm.aspx?word=Mass',%20500,%20500);) of 25.0 grams and a [volume](javascript:def('/Glossary/glossaryterm.aspx?word=Volume',%20500,%20500);) of 29.4 cm3?
2. A  piece of wood that measures 3.0 cm by  6.0 cm by 4.0 cm has a [mass](javascript:def('/Glossary/glossaryterm.aspx?word=Mass',%20500,%20500);) of 80.0 grams. What is the [density](javascript:def('/Glossary/glossaryterm.aspx?word=Density',%20500,%20500);) of the wood? Would the piece of wood float in water? Hint: density of water is 1 g/mL.
3. A cup of gold colored metal beads was measured to have a mass 425 grams. By water displacement, the [volume](javascript:def('/Glossary/glossaryterm.aspx?word=Volume',%20500,%20500);) of the beads was calculated to be 48.0 cm3. Given the following densities, identify the metal.

Gold: 19.3 g/mL

Copper: 8.86 g/mL  
Bronze: 9.87 g/mL

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| 1. I threw a plastic ball in the pool for my dog to fetch. The [mass](javascript:def('/Glossary/glossaryterm.aspx?word=Mass',%20500,%20500);) of the ball was 125 grams. What must the [volume](javascript:def('/Glossary/glossaryterm.aspx?word=Volume',%20500,%20500);) be to have a [density](javascript:def('/Glossary/glossaryterm.aspx?word=Density',%20500,%20500);) of 0.500 g/mL. ( I want it to float of course!) |

1. ****The [volume](javascript:def('/Glossary/glossaryterm.aspx?word=Volume',%20500,%20500);) of a [solution](javascript:def('/Glossary/glossaryterm.aspx?word=Solution',%20500,%20500);) was measured in a graduated [cylinder](javascript:def('/Glossary/glossaryterm.aspx?word=Cylinder',%20500,%20500);) (shown right). If the [mass](javascript:def('/Glossary/glossaryterm.aspx?word=Mass',%20500,%20500);) of [solution](javascript:def('/Glossary/glossaryterm.aspx?word=Solution',%20500,%20500);) is measured to be 60.75 grams, what is the [density](javascript:def('/Glossary/glossaryterm.aspx?word=Density',%20500,%20500);) of the solution?
2. An ice cube measuring 5.80 cm by 5.80 cm by 5.80 cm has a [density](javascript:def('/Glossary/glossaryterm.aspx?word=Density',%20500,%20500);) of 0.917 g/mL. What is the mass?
3. The [density](javascript:def('/Glossary/glossaryterm.aspx?word=Density',%20500,%20500);) of aluminum is 2.70 g/mL. If the [mass](javascript:def('/Glossary/glossaryterm.aspx?word=Mass',%20500,%20500);) of a piece of aluminum is 244 grams, what is the [volume](javascript:def('/Glossary/glossaryterm.aspx?word=Volume',%20500,%20500);) of the aluminum?
4. 450 grams of gasoline has a density of 0.665 g/mL. What is the volume of gasoline?
5. A block of aluminum occupies a volume of 15.0 mL and weighs 40.5 g. What is its density?
6. What is the mass of the ethyl alcohol that exactly fills a 200.0 mL container? The density of ethyl alcohol is 0.789 g/mL.