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| 1) What is the density of a piece of wood that has a mass of 25.0 grams and a volume of 29.4 cm3? |

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| 2) A piece of wood that measures 3.0 cm by  6.0 cm by 4.0 cm has a mass of 80.0 grams. What is the density of the wood? Would the piece of wood float in water?  (volume = *L* x *W* x *H*) |

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| 3) A cup of gold colored metal beads was measured to have a mass 425 grams. By water displacement, the volume of the beads was calculated to be 48.0 cm3. Given the following densities, identify the metal. Gold: 19.3 g/mLCopper: 8.86 g/mLBronze: 9.87 g/mL |

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| 4) I threw a plastic ball in the pool for my dog to fetch. The mass of the ball was 125 grams. What must the volume be to have a density of 0.500 g/mL. (I want it to float of course!) |

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| 5) After throwing the ball in the pool for my dog, the ball sprung a leak and began to fill with water. How many mL of water can the ball absorb before the ball sinks? |

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| 6) The volume of a solution was measured in a graduated cylinder (shown below). If the mass of solution is measured to be 60.75 grams, what is the density of the solution?  |

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| **http://www.algebralab.org/img/62f8e37a-56a8-4631-af2e-630ab945d8e4.gif** |

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| 7) An ice cube measuring 5.80 cm by 5.80 cm by 5.80 cm has a density of 0.917 g/mL. What is the mass? |

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| 8) Gasoline is a non-polar liquid that will float on water. 450 grams of gasoline is spilled into a puddle of water. If the density of  gasoline is 0.665 g/mL, what volume of gasoline is spilled? |

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| 9) The density of aluminum is 2.70 g/mL. If the mass of a piece of aluminum is 244 grams, what is the volume of the aluminum? |

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|  | **10)** A Mind Bender Problem |
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| A little aluminum boat (mass of 14.50 g) has a volume of 450.00 cm3. The boat is place in a small pool of water and carefully filled with pennies. If each penny has a mass of 2.50 g, how many pennies can be added to the boat before it sinks? |

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