Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* This will serve as your notes on density!
* Use pages 16-17 in the text to complete.
* Turn in for credit!

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the most dense substance known.
2. Density is the \_\_\_\_\_\_\_\_\_\_\_\_ of mass to volume. It can be calculated by \_\_\_\_\_\_\_\_\_\_\_\_\_ the mass of an object by the volume.
3. Does the density of a substance change based on the amount of the substance you have? Explain your answer.
4. Explain why density can be used to help identify a substance.
5. Number the following in order from least dense (1) to most dense (7).

\_\_\_\_\_rubber \_\_\_\_\_ oil

\_\_\_\_\_ water \_\_\_\_\_ glycerol

\_\_\_\_\_ cork \_\_\_\_\_ ethanol

\_\_\_\_\_ paraffin

1. The formula (in symbols and words) to calculate density is:
2. What determines if a solid floats in a liquid?
3. What are two “units” used to express density?
4. If a block of iron were placed in a bucket of water, would the iron float or sink? Explain your answer.
5. Which substance is MORE dense: silver or hydrogen gas?
6. What is the density of CO gas if .196 g occupies a volume of 100 mL?
7. A block of wood 3 cm on each side has a mass of 27 g. What is the density of the block? (Hint: you need to find the volume of the block of wood first)
8. An irregularly shaped stone was lowered into a graduated cylinder holding a volume of water equal to 2 mL. The height of the water rose to 7 mL. If the mass of the stone was 25 g, what was its density? (Hint: the difference in the mL gives you the volume of the stone)
9. 5 mL of ethanol has a mass of 3.9 g and 5 mL of benzene has a mass of 44 g. Which liquid is more dense? Show your work.
10. A sample of iron has the dimensions of 2 cm x 3 cm x 2 cm. If the mass of this object is 94 g, what is the density of iron?