

The top of the slide features five circles in a row. From left to right: a solid light purple circle, a light purple circle with a thin white outline, a solid light purple circle, a light purple circle with a thin white outline, and a solid light purple circle.

# What is density?

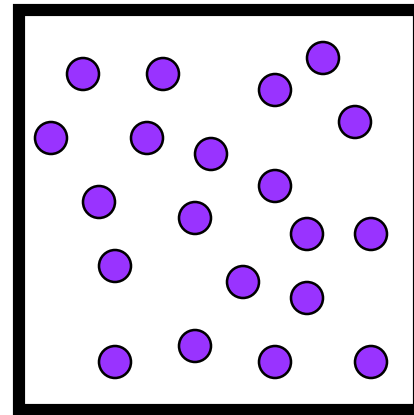
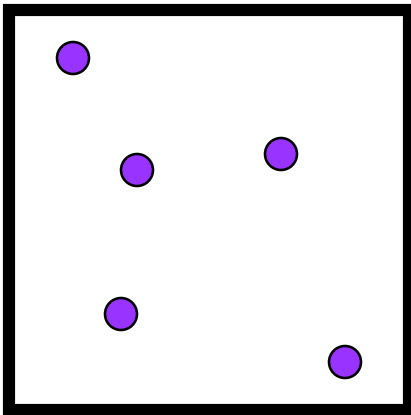
How much “STUFF” in how much “SPACE”



$$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$$

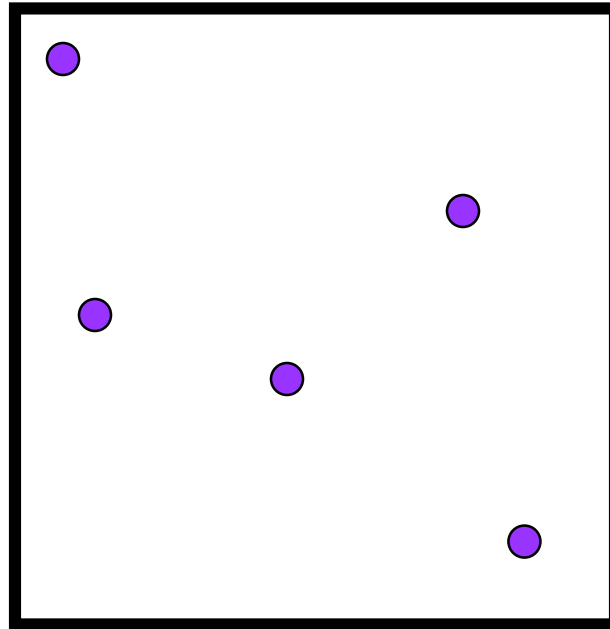
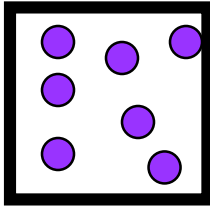
# Which one is more dense?

- How about this: Which square is more dense?



# Which one is more dense?

- Now which one is more dense?



# What are the units for density?

- Density = mass
- volume

- Most common units for density:  $\frac{\text{g}}{\text{cm}^3}$  or  $\frac{\text{g}}{\text{mL}}$
- 

ALWAYS  
REMEMBER  
UNITS!

# Let's try a density problem together

- Frank has a paper clip. It has a mass of 9g and a volume of  $3\text{cm}^3$ . What is its density?



## Work on these problems with your neighbor.

1. Jack has a rock. The rock has a density of  $6.73 \text{ g/mL}$  and a volume of  $8 \text{ cm}^3$ . What is the mass of the rock? **\*\*1 mL =  $1 \text{ cm}^3$**
2. What is the volume of an object if the density is  $1.45 \text{ g/mL}$  and it has a mass of  $15.2 \text{ grams}$ ?
3. What is the density of a block if it has the following dimensions and it weighs  $45.8 \text{ g}$ ?  
 $12 \text{ cm}$  long,  $3 \text{ cm}$  tall, and  $6.5 \text{ cm}$  wide