

You should know that 1 cubic cm of water has a mass of 1 gram.  
What's the mass  
of 1 cubic meter of water?



- |             |                  |
|-------------|------------------|
| A. 10 g     | E. 1 kg          |
| B. $10^2$ g | F. 10 kg         |
| C. $10^4$ g | G. 100 kg        |
| D. $10^6$ g | H. 1000 kg       |
|             | I. None of these |



# A dollar and a penny



- A student makes the following argument:  
"I can prove a dollar equals a penny.  
Since a dime (10 cents) is one-tenth  
of a dollar, I can write:

$$10\text{¢} = 0.1 \$$$

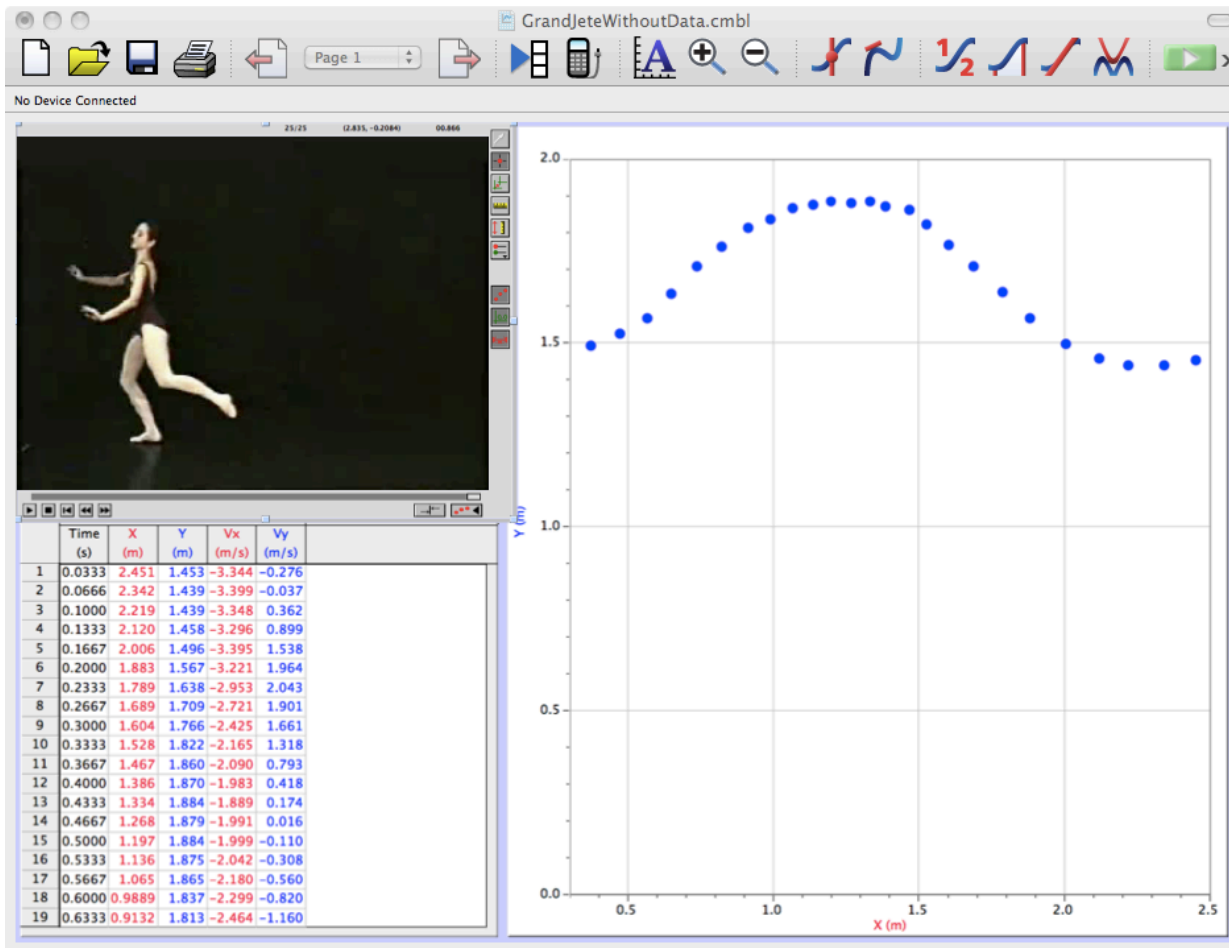
- Square both sides of the equation.  
Since squares of equals are equal,

$$100 \text{ ¢} = 0.01 \$.$$

- Since  $100 \text{ ¢} = 1 \$$  and  $0.01 \$ = 1 \text{ ¢}$   
it follows that  $1\$ = 1 \text{ ¢}.$ "
- What's wrong with the argument?

**Stuck?**  
**Try it with**  
**10 cm = 0.1 m**

# On which side of the $x$ - $y$ graph is the initial time ( $t = 0$ )?



1. On the left.
2. On the right.
3. There is not enough information given to decide.
4. I have no clue.

# Sketch what you think $x-t$ and $y-t$ plots would look like.

