

Name \_\_\_\_\_

PSC1341 Final

Write your answer in the space provided. Show all work. Circle your final answer.

1. The density of mercury is 13.6 g/mL. There are 453.6 grams in a pound.

What is the weight in pounds of 301 mL of mercury?

2. A stone is dropped from the Empire State Building and strikes the ground 6.82 seconds later. How high is the building in meters?

3. An Electronic lift can raise a 480.0 kg mass a distance of 10.0 m in 5.0 seconds.

What was the work done by the lift?

4.  ${}_{39}^{90}\text{Y}$

How many protons in this structure?

How many neutrons in this structure?

5. Complete the following nuclear reactions.



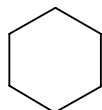
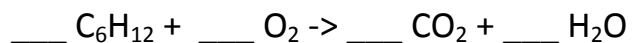
6. A piston is squished from 20.0 mL to 5.00 mL. If the initial pressure was 1.00 atm what is the final pressure? (assume constant temperature,  $T_1=T_2$ )

7. The formula for calcium hydroxide is \_\_\_\_\_.

8. The name of  $\text{MgCO}_3$  is \_\_\_\_\_.

9. What is the name of  $\text{CO}_2$ ? \_\_\_\_\_.

10. Balance the following equation



11.

How many carbons in the above structure? \_\_\_\_\_

How many hydrogens in the above structure? \_\_\_\_\_