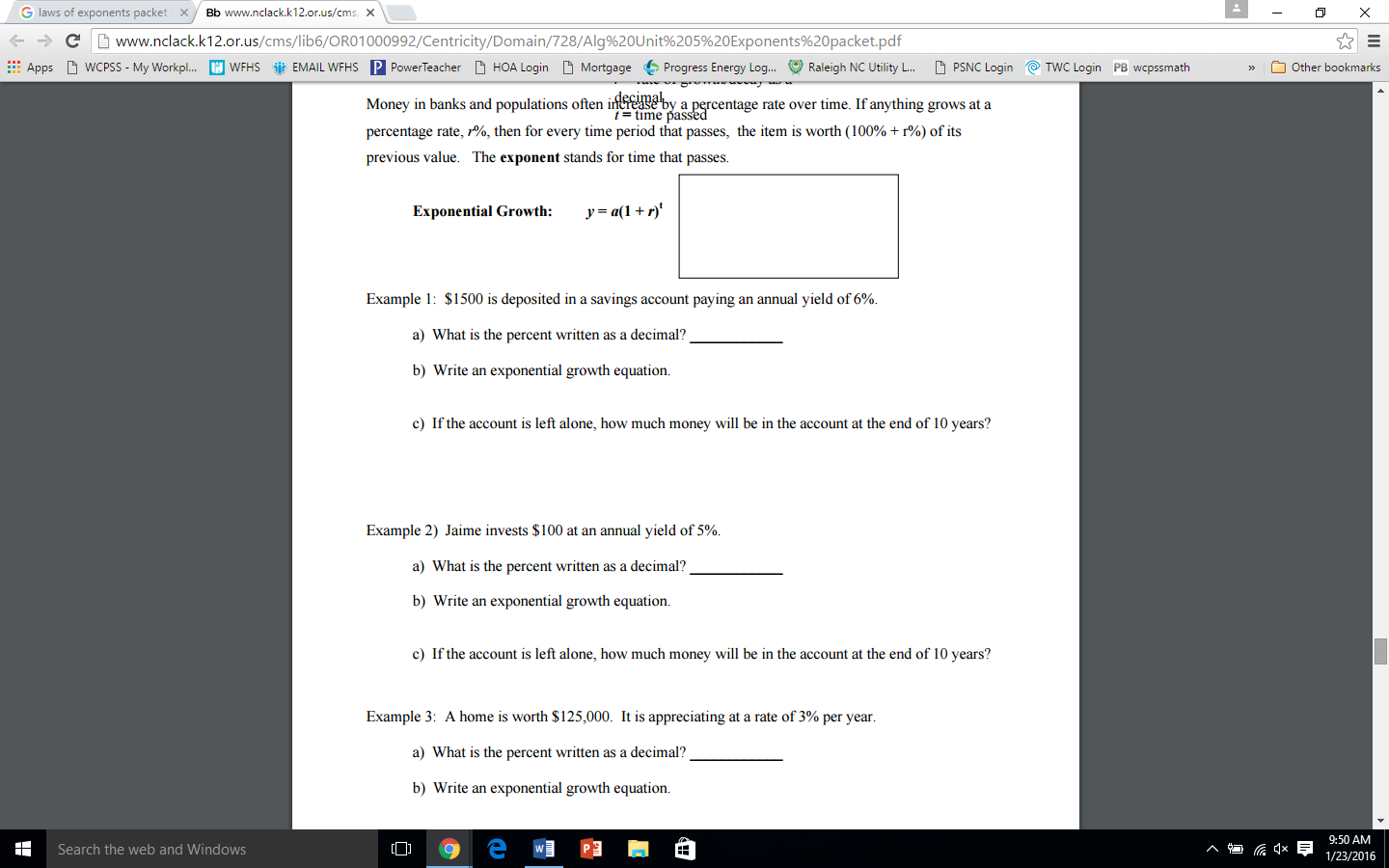
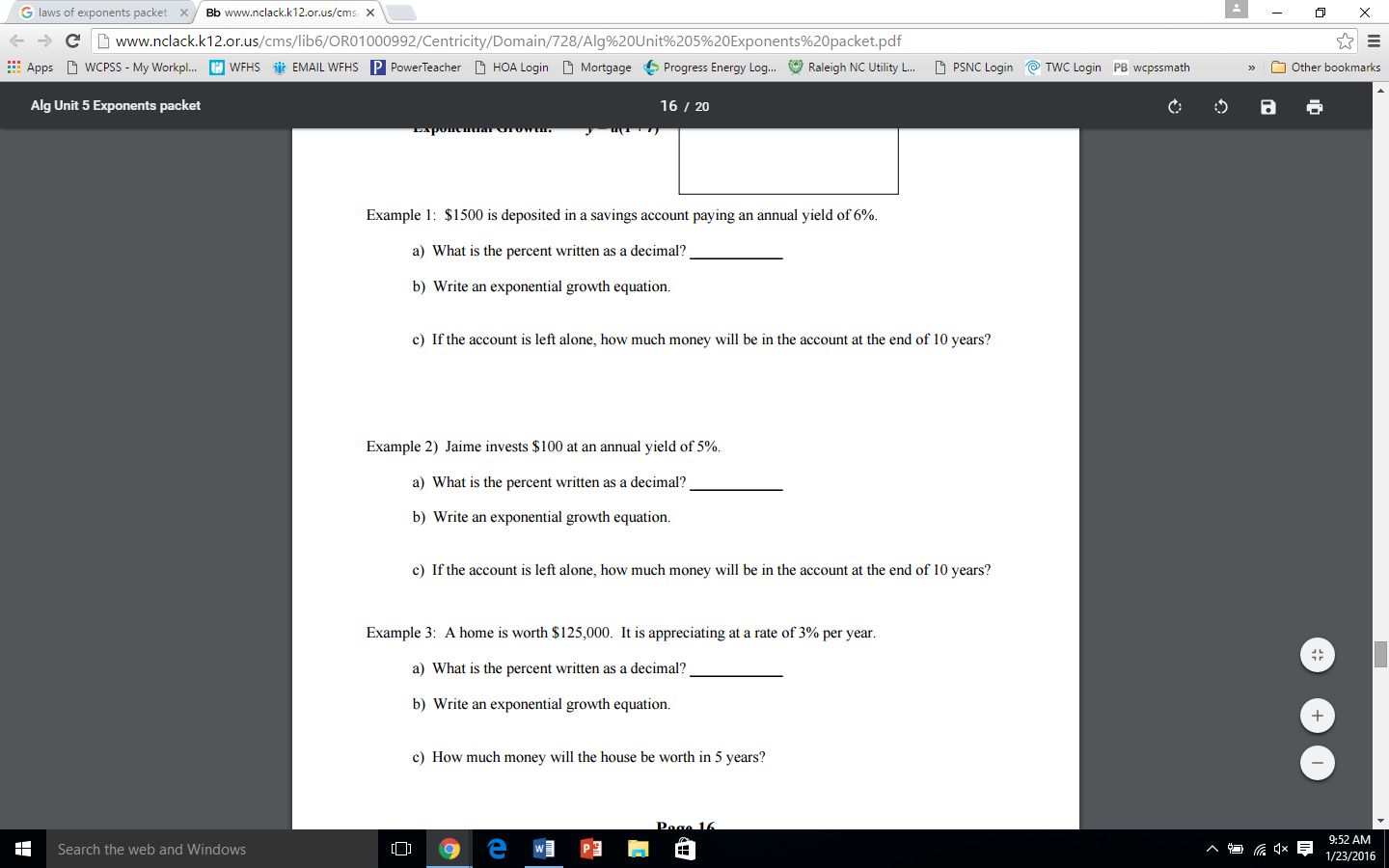
**Exponential Growth**

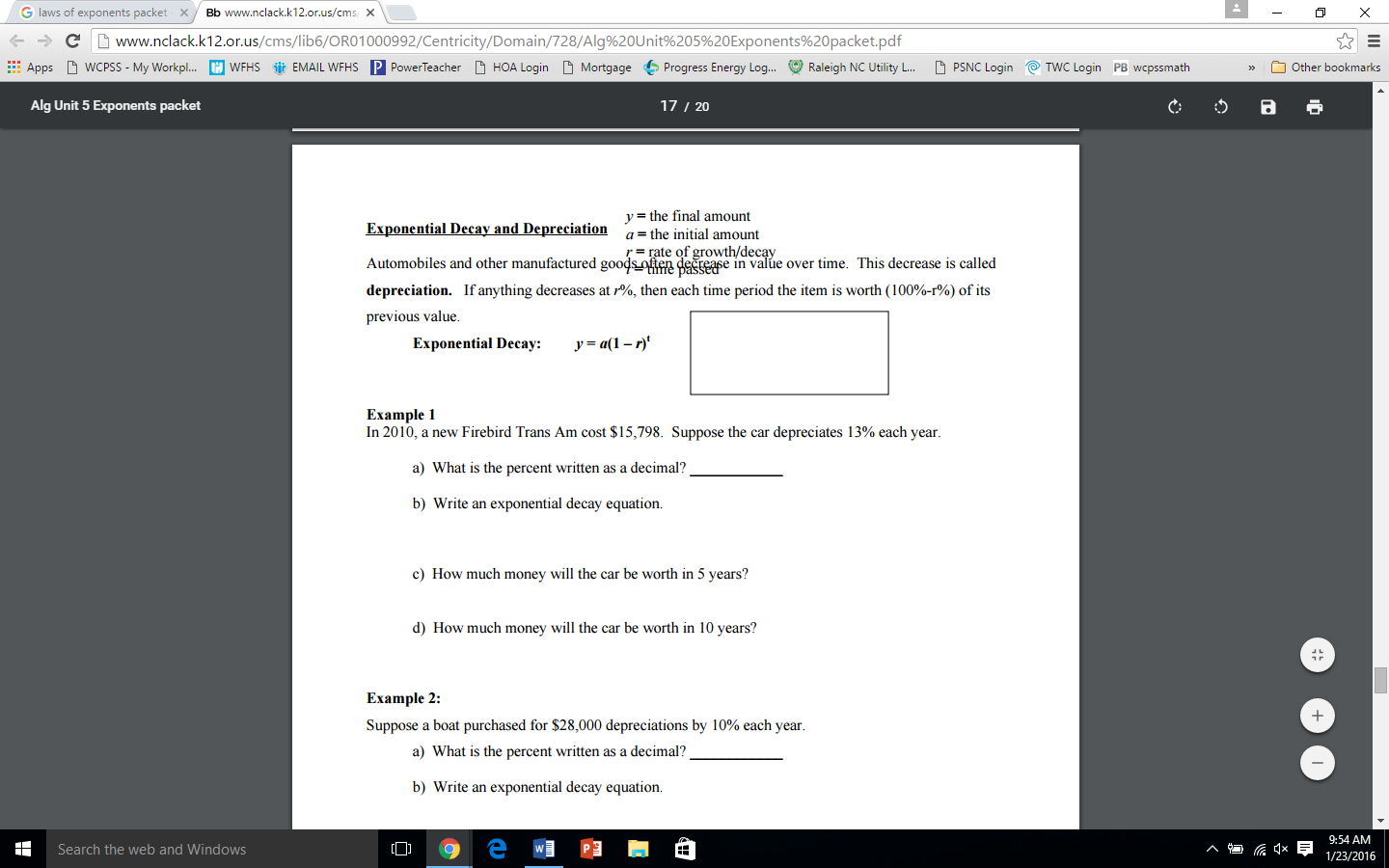
Money in banks and populations often increase by a percentage rate over time.

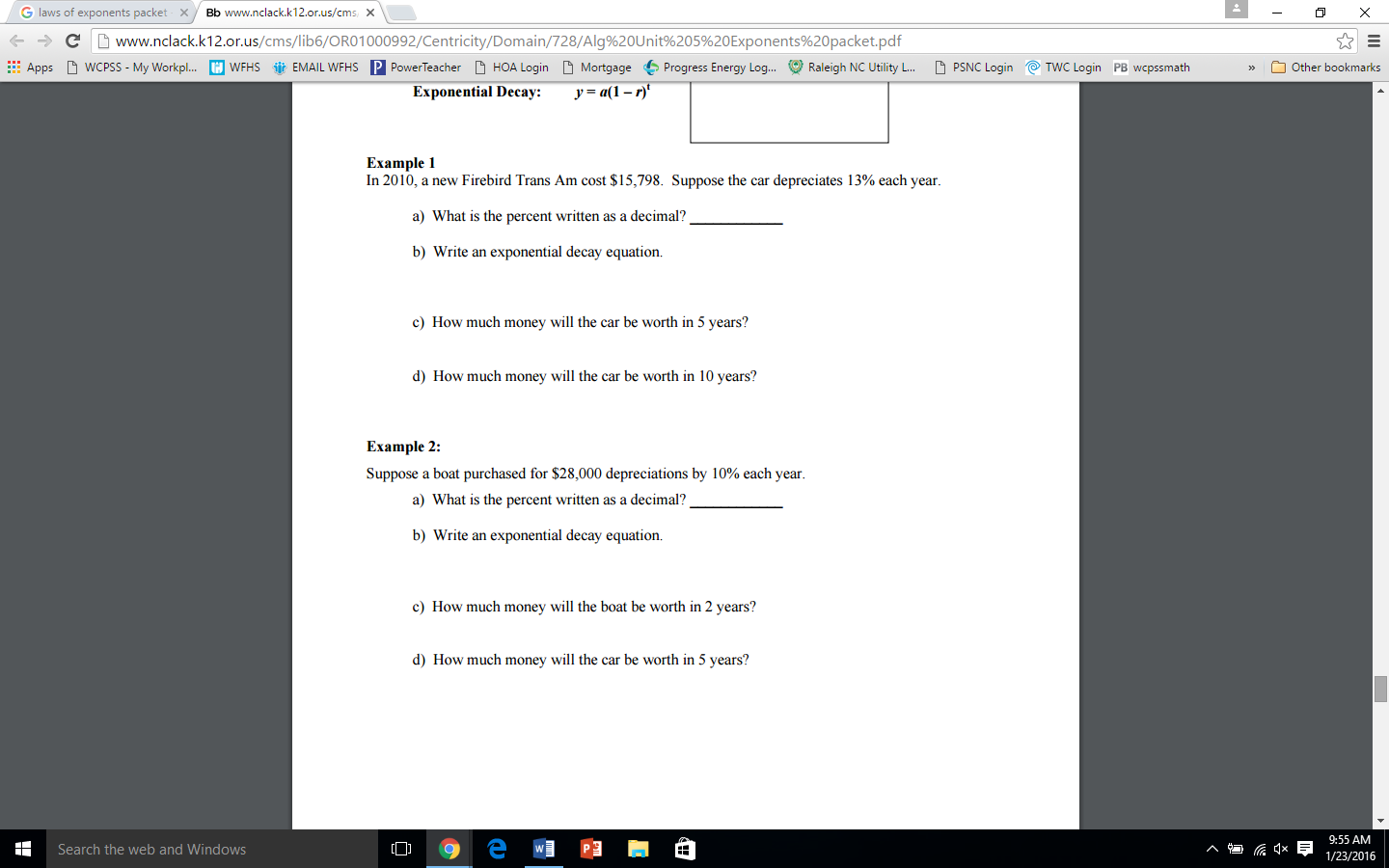




**Exponential Decay**

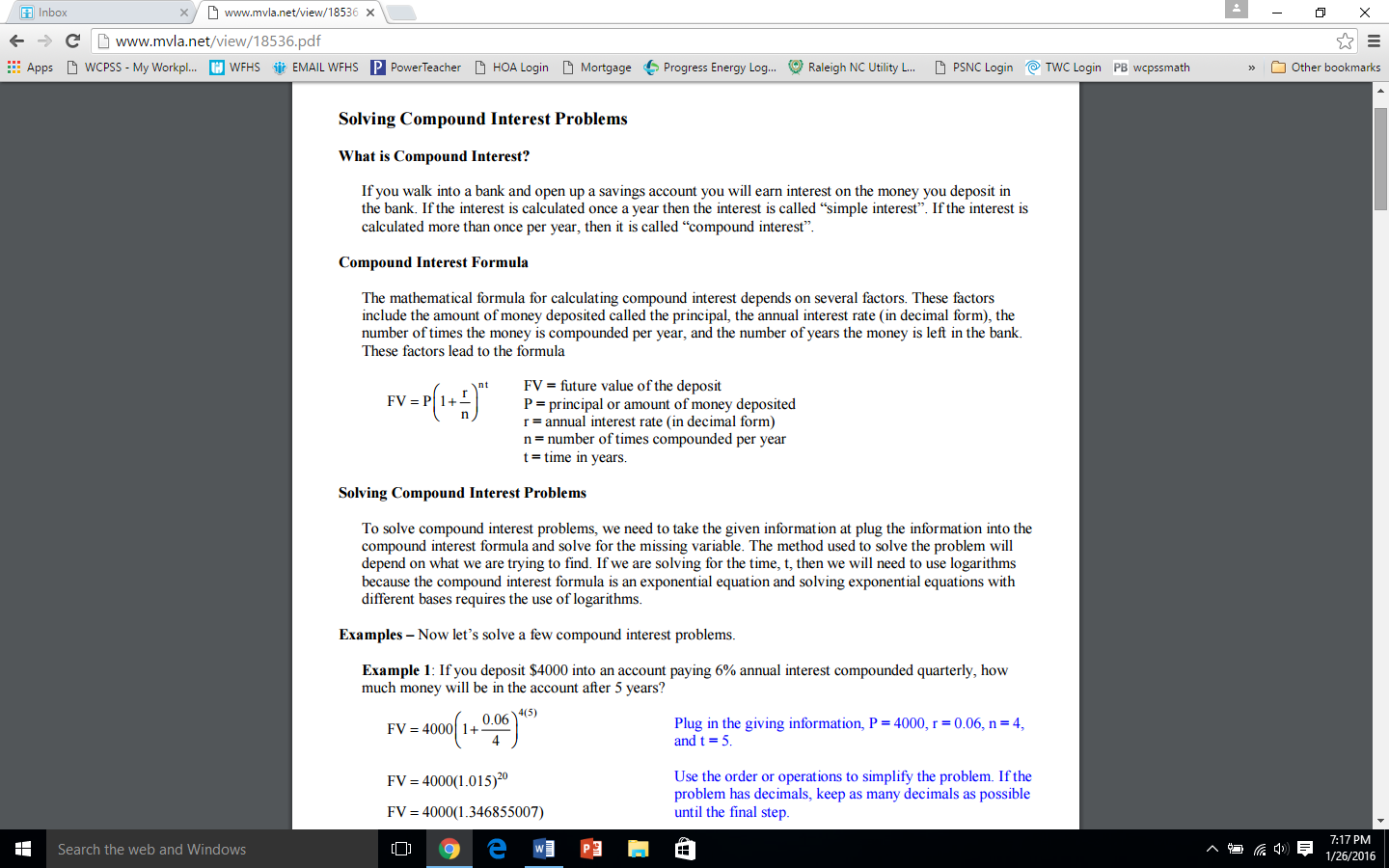
Automobiles and manufactured goods often decrease in value over time.





depreciates by 10% each year.

**Compound Interest**



A

A

Interest can be compounded many different ways. You need to be on the lookout for some keywords to tell you what value to use for n in the formula.

**Annually/Yearly: \_\_\_\_\_\_\_\_ Semi – annually: \_\_\_\_\_\_\_\_**

**Quarterly: \_\_\_\_\_\_\_\_ Monthly: \_\_\_\_\_\_\_\_**

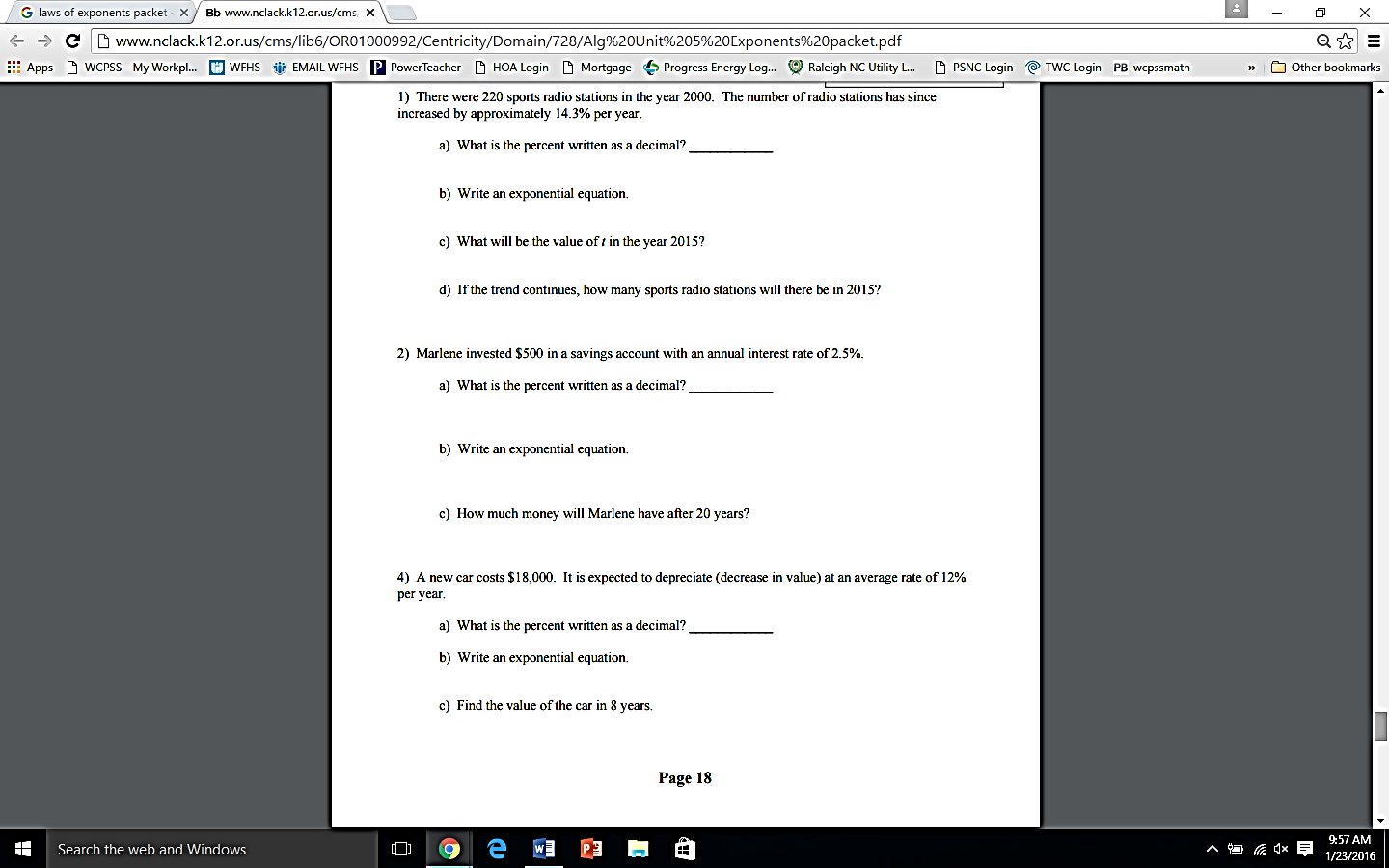
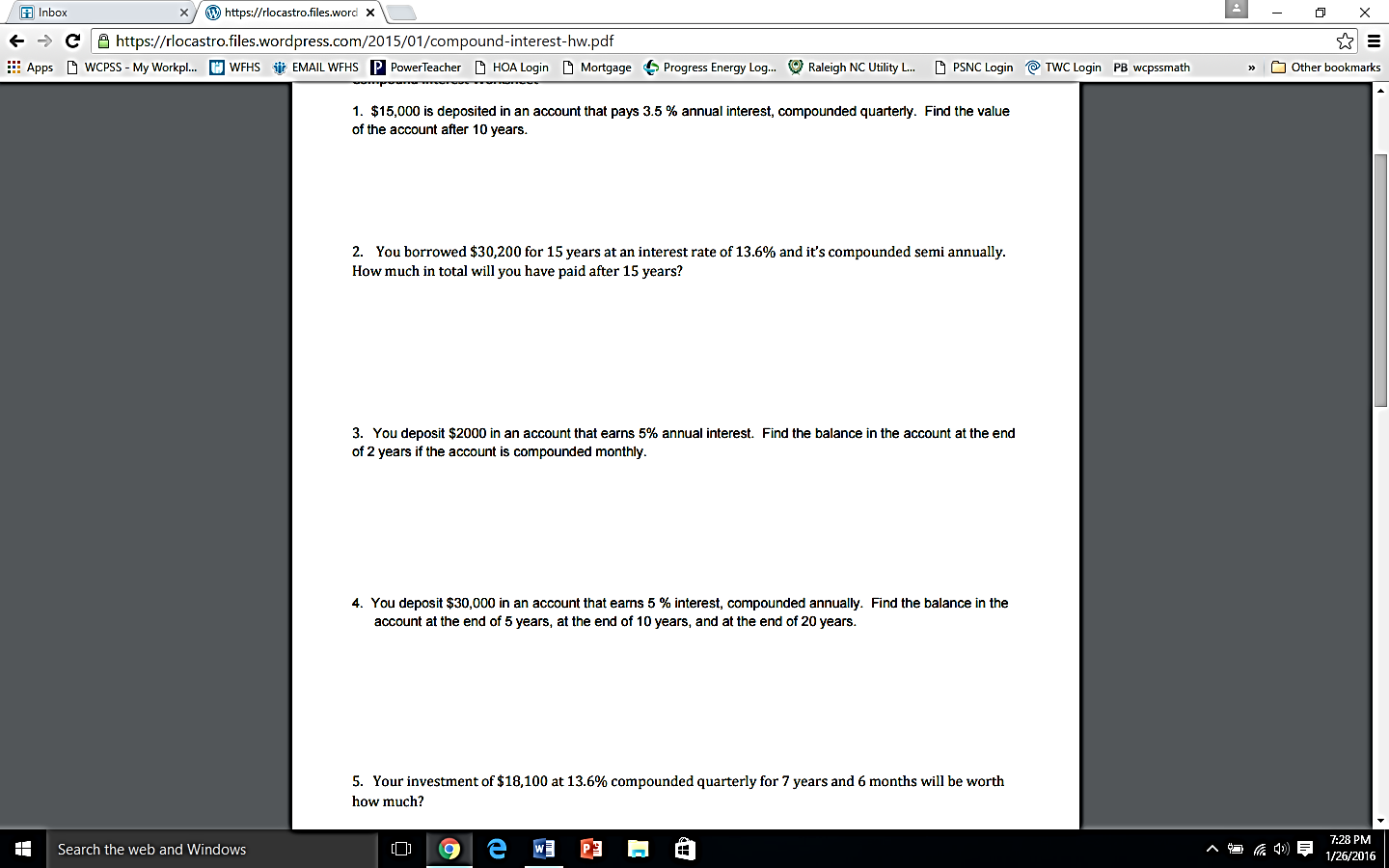
**Weekly: \_\_\_\_\_\_\_\_ Daily: \_\_\_\_\_\_\_\_**

**Example 1:**  If you deposit $4,000 into an account paying 6% annual interest compounded quarterly, how much money will be in the account after 5 years?

**Example 2:** If you borrowed $6,500 and pay 8% annual interest compounded monthly, how much money will you have paid back after 10 years?

**Example 3:** How much money would you need to deposit today at 9% annual interest compounded weekly to have $12,000 in the account after 6 years?

**Day 8 Practice Worksheet**



What will be its value in 2010?

