1. Write a program, area_volume, that prompts the user whether to calculate the area of a rectangle, or the volume of a rectangular prism. If the user enters an “A”, then calculate the area; if they enter a “V”, then calculate the volume. Then, prompt for the **appropriate number** of dimensions needed for the indicated calculation. Allow for floating point numbers.

Note: Use round() to remove the extra decimal digits. Round to two decimals.

2. An employee is paid at their regular wage rate for hours up to and including 40 hours worked. They should receive pay equal to time and a half for every hour worked over 40 hours.

“time and a half” means 1.5 times their regular hourly pay

Create a **pay_roll** program that prompts the user for the number of hours worked in a week and the hourly rate of pay of an employee. The program then calculates the final total pay. Assume all hours entered are whole numbers. Test your program with the following test cases:

Test case 1:

Hours worked: 40 hrs Hourly Pay: $23.50/hr Pay: $940

Test case 2:

Hours worked: 45 hrs Hourly Pay: $23.50/hr Pay: $1116.25

3. Modify the previous **pay_roll** program so that there is an 18% tax deduction from the pay, unless the employee is **exempt**.

The program will need to prompt the user for the tax exemption status. By default, employees are not exempt. In addition to the new pay calculation, the program will display an additional message “No Taxes Deducted” for exempt employees.

Test case 1:

Hours worked: 40 hrs Hourly Pay: $23.50/hr Exempt: No
Pay: $770.80 Message: none

Test case 2:

Hours worked: 40 hrs Hourly Pay: $23.50/hr Exempt: Yes
Pay: $940 Message: No Taxes Deducted

Test case 3:

Hours worked: 45 hrs Hourly Pay: $23.50/hr Exempt: No
Pay: $915.33 Message: none

Test case 4:

Hours worked: 45 hrs Hourly Pay: $23.50/hr Exempt: Yes
Pay: $1116.25 Message: No Taxes Deducted