

CIS 255 - Java Programming  
Homework #3  
Arithmetic Java Classes

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. The equation to convert weight into kilograms to weight in pounds is  $p = 2.2k$ , where  $p$  is pounds and  $k$  is kilograms. Write an interactive Java class named `ConvertWeight` which prompts the user to enter a weight in kilograms, calculates and prints the equivalent weight in pounds.
2. The equation for the volume of a box is  $v = l \times w \times h$ , where  $v$  is volume,  $l$  is the length of the box,  $w$  is the width, and  $h$  is the height. Write a Java class `VolumeBoxCalc` which calculates and prints the volume of a box with length 8 feet, width 3 feet, and height 4 feet. (Do not use interaction)
3. The equation for the volume of a cone is  $v = \pi h r^2$  where  $v$  is the volume,  $h$  is the height, and  $r$  is the radius. Write an interactive Java class `VolumeConeCalc` which prompts the user to enter a height and a radius, calculates and prints the volume.
4. The equation to convert temperature in degrees Fahrenheit to temperature in degrees Celsius is  $c = \frac{5}{9}(f - 32)$ , where  $c$  is degrees Celsius and  $f$  is degrees Fahrenheit. Write a Java class `ConvertTemp` which calculates and prints the Celsius equivalent of 88.0 degrees Fahrenheit. (Do not use interaction)
5. The equation for the circumference of a circle is  $c = 2\pi r$ , where  $c$  is the circumference and  $r$  is the radius. Write an interactive Java class `CircumferenceCalc` which prompts the user to enter the radius, calculates and prints the circumference.