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CS 115 HW 1

1. Arithmetic Operators
   1. Pseudocode:

1 – GET income, monthlydebt

2 – lowerlimit = .36 \* income - monthlydebt

3 – upperlimit = .42 \* income - monthlydebt

4 – WRITE lowerlimit, upperlimit

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| Test Case | Sample | Expected Result | tested |
| High Debt | Income = 4000  Debt = 1000 | Lower Limit = 440.0  Upper Limit = 680.0 | yes |
| Low Debt | Income = 6000  Debt = 500 | Lower Limit = 1660.0  Upper Limit = 2020.0 | yes |
| No Debt | Income = 3000  Debt = 0 | Lower Limit = 1080.0  Upper Limit = 1260.0 | yes |
| Random | Income = 10000  Debt = 3000 | Lower Limit = 600.0  Upper Limit = 1200.0 | yes |

1. Correct Java compile errors
2. The parameter has the same name of an already made variable. Have the parameter be String o, then the statement would be occasion = o
3. It’s a method so it needs a return statement. just put return “”
4. It’s trying to return a char but the method is for a string. Change the variable letterGrade and lg to a string.
5. Pow()

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| Test Case | Expected Result | Tested |
| 2^7 | 128 | yes |
| 2^(-7) | .0078125 | yes |
| (-7)^3 | -343 | yes |
| 5^(.5) | 2.23607 | yes |

1. Sphere

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| Test Case | Expected Result | Tested |
| Radius = 5 | Volume = 523.5988  Area = 314.15927 | yes |
| Radius = 1 | Volume = 4.1887  Area = 12.56637 | yes |
| Radius = 19 | Volume = 28730.9120  Area = 4536.45979 | yes |
| Radius = 5.5 | Volume = 696.90997  Area = 380.1327 | yes |