

# PBL ASSIGNMENT – MS EXCEL CALCULATORS

## Measurement Calculators

Create the following calculators in Excel. Make sure to format for units, user inputs and pleasant GUI using borders, font, colours, etc.

Calculator	Formula/Equation
<b>Volume of a Cone</b>	$V = \frac{1}{3}\pi r^2 h$
<b>Volume of a Sphere</b>	$V = \frac{4}{3}\pi r^3$
<b>Volume of a Cuboid &amp; Rectangular Prism</b>	$V = x^3$ $V = l \times w \times h$
<b>Total Surface Area of a Closed Cylinder</b>	$TSA = 2\pi r(r + h)$
<b>Total Surface Area of a Cube and Cuboid</b>	$TSA = 2lw + 2lh + 2wh$
<b>Areas and Perimeters of Square, Rectangle, Circle and Triangle</b>	Various, look up notes.

You will be marked on:

- Working Calculator (deduction on 10% of overall grade for each incorrect calculator) – 30%
- Functionality (i.e. ease of use) – 10%
- Invalid Inputs (i.e. error messaging and making user re-enter a valid input) – 20%
- Helpful tips in your calculator for users. – 20%
- Presentation, with specific focus on the use of colours, borders, fonts, etc. Knock our socks off – 20%.

Submit your spread sheet (create one spread sheet with the use of appropriate tabs for the calculators) in the drop box supplied. Please note the due date.