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**MODULE II**

Goal:

Use Excel© to create formulas to generate volume of rectangular 3dimensional figures

Steps:

1. Go to the following website [Rectangular Surface Area and Volume](http://staff.argyll.epsb.ca/jreed/math9/strand3/formulae.htm#s_v) and scroll down window with the same title.
2. The rectangular figure should appear with the dimensions 10 cm (units) x 10 cm (units) x 10 cm (units).
3. Change the dimensions to a width of 5 cm by a length of 6 cm by a height of 7 cm by dragging the sides of the shape
4. Record the:
   1. Surface Area:       cm sq
   2. Volume perimeter:       cubic cm
5. Repeat steps 3-5 above for the following dimensions
   1. width 7cm x length 8cm x height 5 cm

Surface Area:

Volume:

b. width 9cm x length 10cm x height 7cm

Surface Area:

Volume:

1. Record the equations use for each value from the screen
   1. Surface Area:
   2. Volume:
2. Load Excel Template: [Exploring Area Perimeter and Volume](http://sitebuilder.yola.com/sites/S3/D593/D264/D3fb/D5aa/U8a4986cb22a977750122aa5bf3462395/8a49866a2729b66801272b55d2431289/resources/Area%20Perimeter%20Volume.xlsx)
   1. Note dimensions for rectangular figures have already been entered
   2. There are three titled sheets, Area and Perimeter
   3. Go To VOLUME sheet
      1. Go to Cell H11, and using the equation in 6 above for a guide, write a formula to calculate VOLUME, and record your formula here:
      2. Hint: \* is multiplication in Excel©
      3. Copy F11 down the column to calculate remaining values
3. Based on the values generated, can you make an educated guess about how the graphs we generated from the AREA and PERIMETER sheets will compare to VOLUME? What will they look like (use descriptive terms such as increasing or decreasing, steep slope, curve opening in a certain direction)?
4. Which values are larger, area or perimeter or volume (highlight correct answer)? In your own words, how do you explain this?
5. BONUS: Between area and perimeter, which of these values is used in calculating volume, yet repeated based on the height of the figure?