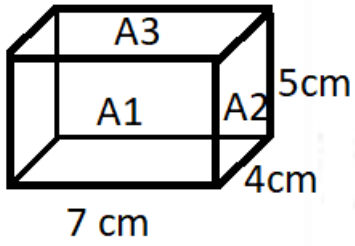
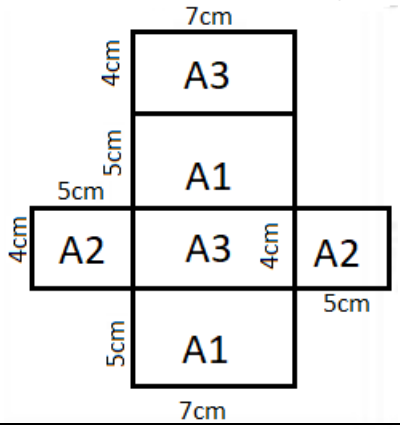
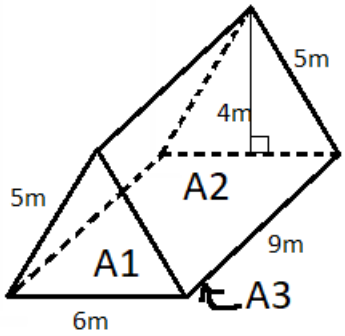
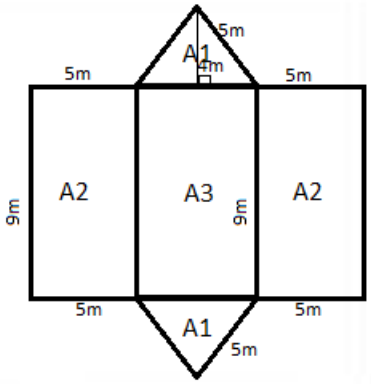
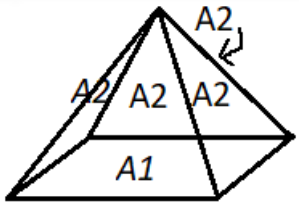
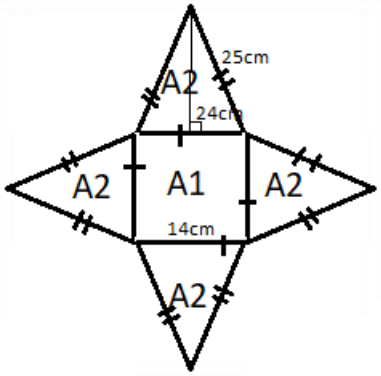
Grade 7/8 Math **3D figures, Nets and Surface Area Formulas**

Name: _____ Class: _____ Date: _____

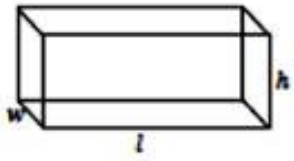
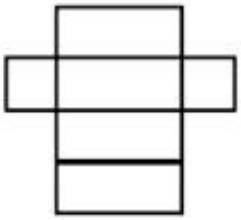
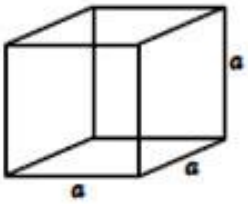
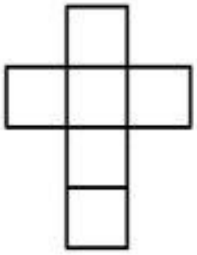
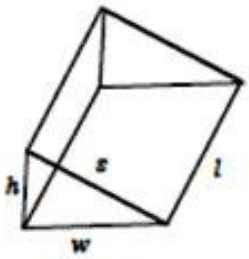
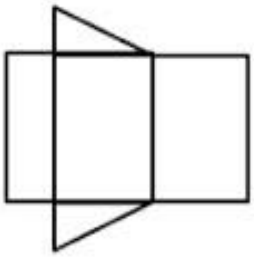
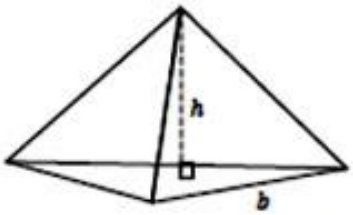
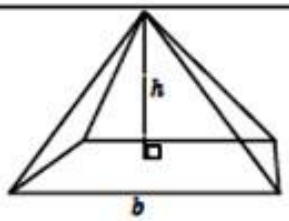
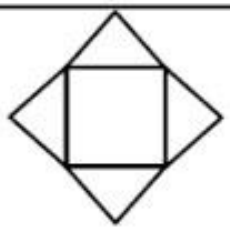
3-Dimensional Figure and Name	Net	Formula for Surface Area
Rectangular Prism 		AT = A1+A1+A2+A2+A3+A3 AT = 2A1 + 2A2 + 2A3 AT = 2(A1 + A2 + A3)
Triangular Prism 		AT = A1+A1+A2+A2+A3 AT = 2A1 + 2A2 + A3
Square Based Pyramid 		AT = A1+A2+A2+A2+A2 AT = A1 + 4A2

Any shape can be broken down into the net – or a representation of all of the faces of that 3D figure. We just have to make sure that we make a sketch and properly label all faces. If a face is the same, call it the same as the other face so that you do not have to calculate it again – but if any dimension is different, you have to make a new face. It is easiest to use the principal face of the figure and that is the one that the figure is named after – **Rectangular** prism, **Triangular** -based pyramid, etc. Make a larger formula and then calculate each face and put them together as a Total Area – AT (Area Total).

For a Cube, AT = 6A1 - since there are 6 identical squares.

For each of the figures above, calculate the Total Area of the figure using the formulas given.

Surface Area Review

Shape	Net	Formula
 right rectangular prism		$SA = 2(wl + hl + hw)$ w = width l =length h =height
 cube		$SA = 6a^2$ a = edge length
 right triangular prism		$SA = wh + lw + lh + ls$ w = width l =length h =height s =side
 regular triangular pyramid		$SA = 4\left(\frac{1}{2}bh\right)$ b =base h =height
 square pyramid		$SA = A_{base} + 4(A_{side})$ $A_{base} = b^2$ $A_{side} = \frac{1}{2}bh$ b =base h =height

