Geometry 12-2: Nets and Surface Area

I. Nets
If you cut a cardboard box at the edges and lay it flat, you will have a pattern, or net, for the three-dimensional solid. Nets can be made for any solid figure.

Example 1: This net is a pattern for the cube. It can be folded into the shape of the cube without any overlap.

Example 2: Multiple Choice
Which net could be folded into a pyramid if folds are made only along the dotted lines?

II. Surface Area
Nets are very useful in visualizing the polygons that make up the surface of the solid. The surface area is the sum of the areas of each face of the solid.

Example 3: The surface area of tetrahedron QRST is the sum of the areas of $\triangle QRT$, $\triangle QTS$, $\triangle QRS$, and $\triangle RST$. 

Q
R
T
S

P
Q
R
S

T
Example 4:

a. Draw a net for the right triangular prism shown.

b. Use the net to find the surface area of the triangular prism.