Lesson 16: Constructing Nets

Classwork

Opening Exercise

Sketch the faces in the area below. Label the dimensions.



Exploratory Challenge 1: Rectangular Prisms

* 1. Use the measurements from the solid figures to cut and arrange the faces into a net.

3

6

7

* 1. A juice box measures $4 $inches high, $3 $inches long, and $2 $inches wide. Cut and arrange all $6$ faces into a net.

![C:\Users\glenn.gebhard\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\V8N0GMCL\MC900232682[1].wmf]()

* 1. Challenge: Write a numerical expression for the total area of the net for part (b). Explain each term in your expression.

Exploratory Challenge 2: Triangular Prism

Use the measurements from the triangular prism to cut and arrange the faces into a net.



Exploratory Challenge 3: Pyramids

Pyramids are named for the shape of the base.

* 1. Use the measurements from this square pyramid to cut and arrange the faces into a net. Test your net to be sure it folds into a square pyramid.



* 1. A triangular pyramid that has equilateral triangles for faces is called a tetrahedron. Use the measurements from this tetrahedron to cut and arrange the faces into a net.



Problem Set

1. Sketch and label the net of the following solid figures, and label the edge lengths.
	1. A cereal box that measures $13 $inches high, $7 $inches long, and $2 $inches wide
	2. A cubic gift box that measures $8 cm$ on each edge
	3. Challenge: Write a numerical expression for the total area of the net in part (b). Tell what each of the terms in your expression means.
2. This tent is shaped like a triangular prism. It has equilateral bases that measure $5 $feet on each side. The tent is $8 $feet long. Sketch the net of the tent, and label the edge lengths.



1. The base of a table is shaped like a square pyramid. The pyramid has equilateral faces that measure $25 $inches on each side. The base is $25 $inches long. Sketch the net of the table base, and label the edge lengths.
2. The roof of a shed is in the shape of a triangular prism. It has equilateral bases that measure $3 $feet on each side. The length of the roof is $10 $feet. Sketch the net of the roof, and label the edge lengths.