POLLY'S POLYDRON

Created by
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POLYDRONS

TERMS

POLYGON: A closed two-dimensional figure that is formed by three or more line segments.

POLYHEDRON: A three-dimensional figure formed by four or more polygonal faces.
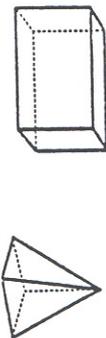
EDGE: The line formed by the intersection of adjacent faces in a polyhedron.

The lines are the edges of the cube
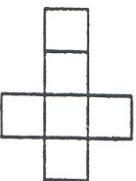
FACE: One of the polygons that forms a polyhedron.

VERTEX: A point where three or more edges of a polyhedron intersect.
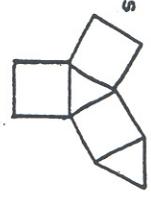
The dots mark the vertices of the cube

NET: a two-dimensional representation of a three-dimensional shape.
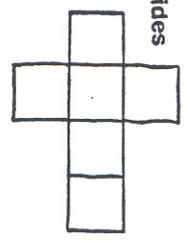
6th Six Weeks, Unit 12, p.23

Use the Polydrons to build the following nets to form Polyhedrons. Build each one at a time and count the number of "V" vertices, "F" faces and "E" edges each one has and record. These type of figures are known as "PRISMS"
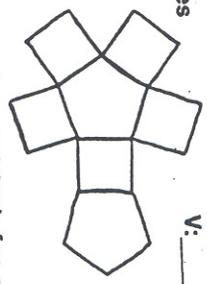
1. base has 3 sides   V:___ F:___ E:___

2. base has 4 sides   V:___ F:___ E:___

3. base has 5 sides   V:___ F:___ E:___

Record your findings below and look for a pattern to help you complete the chart.

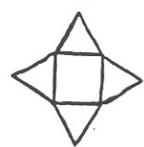| Number of sides for the base	Number of vertices	Number of faces	Number of edges
3			
4			
5			
6			
7			
10			
n			

What do all 3 of the prisms you made have in common ?

Use the Polydrons to build the following nets to form Polyhedrons. Build each one at a time and count the number of "V" vertices, "F" faces and "E" edges each one has and record. These types of figures are known as "PYRAMIDS"
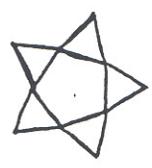
1. base has 3 sides   V:___ F:___ E:___

2. base has 4 sides   V:___ F:___ E:___

3. base has 5 sides   V:___ F:___ E:___
(you will not be able to fold the pieces into a pyramid, but you can turn up the sides)

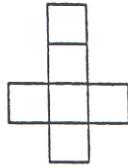Record your findings below and look for a pattern to help you complete the chart.

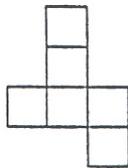| Number of sides for the base	Number of vertices	Number of faces	Number of edges
3			
4			
5			
6			
7			
10			
n			

What do all the pyramids you built have in common ?
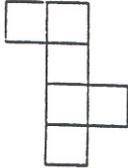
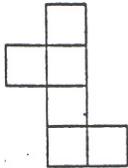Build the following nets and determine if they can be folded to form a cube.
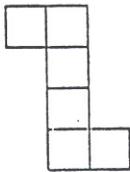
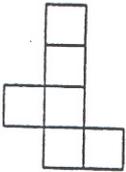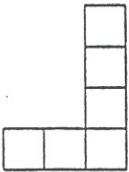1. YES or NO

2. YES or NO

3. YES or NO

4. YES or NO

5. YES or NO

6. YES or NO

7. YES or NO

MAKE A PYRAMID WITH A SQUARE BASE FROM THE FOLLOWING NET.

NET 1

NOW TAKE THE PYRAMID APART IN 4 WAYS AND DRAW THE RESULTING NET IN THE SPACE BELOW:

NET 2

NET 3

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