Warning! Construction Zone: Building Solids from Nets

Brief Overview:

In this unit the students will be examining and defining attributes of solids and their nets. The students will be expected to have a basic understanding of 3-D attributes before beginning this unit. Hands on activities are a large part of this unit along with interactive websites. The unit begins with the students finding examples of solids in their daily surroundings. The students build solids using marshmallows and coffee stirrers to easily identify the vertices and edges. The students will be working at centers where they will be composing and decomposing solids to observe the nets and exploring alternate nets for solids. This unit's culminating activity has the students building a package for a birthday gift.

NCTM Content Standard:

- Use visualization, spatial reasoning, and geometric modeling to solve problems.
- Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

Grade/Level:

Grade 4

Duration/Length:

3 days, 60 minute lessons.

Student Outcomes:

Students will be able to:

- create and describe mental images of objects, patterns, and paths;
- identify and build a three-dimensional object from two-dimensional representations of that object;
- identify and draw a two-dimensional representation of a three-dimensional object;
- recognize geometric ideas and relationships and apply them to other disciplines and to problems that arise in the classroom or in everyday life.
- identify, compare, and analyze attributes of two- and three-dimensional shapes and develop vocabulary to describe the attributes;
- classify two- and three-dimensional shapes according to their properties and develop definitions of classes of shapes such as triangles and pyramids;

- make and test conjectures about geometric properties and relationships and develop logical arguments to justify conclusions.

Materials and Resources:

Lesson 1
- Teacher Resource 1-7
- Computer for teacher
- LCD projector or alternative way to display website (i.e. TV hook up)
- Poster paper
- 3-D solids (cylinder, cone, rectangular prism, triangular prism, triangular pyramid, rectangular pyramid, and cube)
- Student Resource 1 – Real-World Examples (1 per student)
- Student Resource 2 – Venn Diagram (1 per student)
- Teacher created cube using marshmallows and coffee stirrers
- Baggies containing about 15 small marshmallows or gumdrops and about 10 halves and 5 whole coffee stirrers (Enough for one baggie per student)
- Student Resource 3 – Solids Attribute Chart (1 per student)
- Computers for students (Differentiation activities)
- Student Resource 4 – Extension Activity (1 per student)

Lesson 2
- Teacher Resource 1, 8
- Student Resource 5 – Mystery Question (1 page per 2 students)
- Student Resource 6 – Dot Paper with 3-D Drawing (1 per student)
- Dot paper (several pages per student)
- Dot paper transparency or copy (for use with overhead projector or document viewer respectfully)
- Overhead projector/document viewer
- Student Resource 7 – Cube Net (1 per student)
- Scissors
- Tape
- Nets cut out (1 each of cylinder, cone, rectangular prism, triangular prism, triangular pyramid, rectangular pyramid, and cube)
- Solids built from nets (1 each of cylinder, cone, rectangular prism, triangular prism, triangular pyramid, rectangular pyramid, and cube)
- Paper bags (7)
- Computers (Differentiation activities)

Lesson 3
- Teacher Resource 1
- Student Resource 9 – Mystery Solid (1 page per 2 students)
- 1 small item per group. Items should be small enough that a net can be created from poster sized grid paper or multiple sheets of grid paper taped

together. (For example: space shuttle model, keyboard, book, scissors, stuffed animal, glue bottle, other items around your school)
- Calculators (1 per student + 1 for teacher)
- Student Resource 10 - Grid paper 1 inch (multiple sheets per 2 students)
- Student Resource 11 – Birthday Party Activity (1 per student)
- Poster sized grid paper (1 inch) or Student Resource 10 (multiple sheets per 2 students)
- Overhead projector or document viewer
- Student Resource 12
- Computers (Differentiation activities)

Development/Procedures:

Lesson 1

Pre-Assessment

See Teacher Resource 2 for pre-lesson preparations.

- Students are divided into 7 groups. Distribute a piece of poster paper and a marker to each group. Each group is also given a different solid (cylinder, cone, rectangular prism, triangular prism, triangular pyramid, rectangular pyramid, and cube). The groups are given 4-5 minutes to list all observations of their solids on their poster paper. At the end of the 4-5 minutes, each group presents their findings to the class. Their classmates are allowed to add other traits to the lists. Encourage students to use mathematical vocabulary (edge, vertex, face, square, triangle, etc.).

Launch

- Take students for a brief nature walk, or a walk around the school/classroom. The students will take Student Resource 1, a pencil and something to write on (dry erase board, clip board, etc.). Have the students look for real-world examples of the solids and record their findings. After returning to the classroom use a computer to project the following website.
  ohttp://www.harcourtschool.com/activity/solid_figure_factory/
- The website requires viewers to select a solid and then pieces drop onto the conveyer belt. At this time have students call share the real-world examples they found of that solid. The doors will close on the website's machine as it turns the pieces into a real-world example of that solid. The machine then produces the real-world example of the solid and it drops into the wheelbarrow. After going through the website, the students will also need to discuss their findings for a triangular prism, as they are not on the website. **Note: The website has a sphere as an example. However spheres are not explicitly taught in this unit.**

Teacher Facilitation/Student Application

- Student groups are given a rectangular prism and a rectangular pyramid and will complete a Venn diagram comparing the two solids, Student Resource 2.

Answer key can be found on Teacher Resource 3. Facilitate a discussion of the similarities and differences between the two (2) solids, continuing to use the mathematical vocabulary. Use a transparency and overhead projector or document viewer to complete the Venn diagram along with the students. Make sure to ask students:

- What is similar about the names of the solids? What is similar about the solids? What is different about the names of the solids? What is different about the solids? What rule can we make for prisms and pyramids based on our observations of these two solids? **Be sure to clarify the different sides for each solid. (Prisms: rectangular faces; Pyramids: triangular faces)

- Distribute a solid to each student (can be real-world examples or self-created. See Teacher Resources 5 and 6 for nets. Have the students find and put their fingers on a face of their solids. Facilitate a discussion of the traits of a "face" (a flat side of a solid figure). Have the students find and place their fingers on an edge of their solids. Facilitate a discussion of the traits of an "edge" (a line segment or line where two faces meet). Have the students find and place their fingers on a vertex of their solids. Facilitate a discussion of the traits of a "vertex" (a point where three or more edges meet). Allow students to find examples of faces, edges and vertices in the classroom.
- Show the students a cube that was created from coffee stirrers and marshmallows. Have the students discuss what the stirrers and the marshmallows represent. Distribute a small plastic bag of marshmallows and coffee stirrers to each student. Assign each student a solid to create using their marshmallows and coffee stirrers. Make sure that each of the following solids has been selected: rectangular prism, triangular prism, triangular pyramid, rectangular pyramid (there is no need to create a cube because it has already been created and cone and cylinder will not work). Give a copy of Student Resource 3 to each student. Select a student who created each solid to present their solid to the class. The student should discuss the number of edges, faces and vertices along with the shapes of the faces. Students will record this information on Student Resource 3. Answer key can be found on Teacher Resource 4. ****Note: In the final column of Student Resource 3 (Shape of Faces) encourage students to draw the faces instead of listing them.** Facilitate a discussion as to why a cone and cylinder could not be created from the given materials (a cone has a round face and curved top and cylinder has round faces which will not be accurately displayed using straight objects). This also demonstrates why rectangular prism, triangular prism, cube, triangular pyramid, rectangular pyramid are considered polyhedra (plural of polyhedron) and the cone and cylinder are nonpolyhedra. Polyhedron is defined as a solid with only flat faces.

Embedded Assessment (Use Teacher Resource 1 to record)

- Are the students able to identify faces, edges and vertices?
- Are the students able to accurately identify the solids based on attributes? (cylinder, cone, rectangular prism, triangular prism, triangular pyramid, rectangular pyramid, and cube)

Reteaching/Extension

- Reteach:
  - Option 1: Pull struggling students to explicitly teach how to count the edges, faces and vertices to ensure accurate counting. Use website http://illuminations.nctm.org/ActivityDetail.aspx?ID=70 to manipulate a virtual cube and triangular pyramid (may need to click "new shape" to find these particular solids) to identify the number of each attribute. When using hands on materials demonstrate organized thinking during counting. For example, count all of the edges on the top of a cube, then all of the edges on the bottom, and then the edges along the sides. Be sure the cube is kept stationary to assure students are not counting attributes multiple times or missing them altogether.
  - Option 2: Review the defining characteristics of the solids, especially focusing on the difference between prisms and pyramids.

- Extend:
  - Option 1: Students will be given Student Resource 4 a-b to complete with marshmallows and coffee stirrers. Answer key can be found on Teacher Resource 7a-b.
  - Option 2: Students will go to http://www.harcourtschool.com/activity/solid_figures/ where they will determine a solid by looking at the 2-D image of the top, bottom, and side.

Lesson 2

Pre-Assessment

See Teacher Resource 2 for pre-lesson preparations.

- Give each student a square and have them list as many solids including real-world objects that are constructed from at least one square. List on poster paper.

Launch

Mystery Question (only using 2-D figures to describe solids) Student Resource 5. Answer key can be found on Teacher Resource 8.

Teacher Facilitation/Student Application

- Distribute Student Resource 6 to each student. Allow students the opportunity to trace then draw a cube on the Student Resource 6. Model 3-D drawing on the overhead or document viewer for students. Model how to count the edges and vertices in an organized manner on the 3-D drawing of the cube (trace the edges on the front, back then sides, and circle the vertices on the front then the back). Have students predict what a 2-D representation of a cube would look like using color tiles to manipulate the positioning of the squares. Facilitate a discussion to help students visualize their positioning. Ask:

- What real-world objects are cubes; what polygons make up a cube; how many squares make up a cube; will the squares be connected, how?

- Pass out Student Resource 7 and explain to the students they are receiving a net of a cube. Explain that a net is a pattern that is cut out and folded to make a solid shape. Have the students cut out their net along the solid lines and fold along the dashed lines to find how the cube is constructed. ****Note: There are no tabs on this net because it is simply for folding, not constructing the cube.** Discuss how folding up the paper is similar to fishing. When fishing, people lay the net in a flat position and then pull it up quickly to gather the fish. This is what we do with our 2-D representation of our solids. This is how we can remember to call these 2-D representations "nets".
- Break students into 7 groups and give Student Resource 8 to each group. Explain that the groups will be rotating around paper bag centers. Each center will either have a net or a solid next to a paper bag and the other inside the bag. ***Note: At centers, have the cone, cylinder and triangular pyramid as <u>nets</u> outside of the bags and the cube, triangular prism, rectangular pyramid and the rectangular prism as <u>solids</u> outside of the bag**
- *<u>Directions for centers:</u>*
  - At a center with a solid beside the bag, the students are responsible for individually drawing what they believe the net will be (They may come to a common decision. However, each student should draw the nets). Once the drawings are complete, the students will open the paper bag and check their drawing against the actual net found in the bag. If the students' drawings were different from the net in the bag, the students will draw the net found in the bag then cut their net out and test its accuracy. If incorrect, they will make the appropriate changes. Students will then try to create a different net tracing the patterns found inside the bag that will build their given solid. At each center, the students will need to have the nets labeled as to which solid they build.
  - At a center with a net beside the bag, the students will trace the net on their paper and then guess what solid the net creates. The students will open the bag and determine whether their guess was correct or incorrect. If it is incorrect, the students will need to make the appropriate changes to their answer. Students will then try to create a different net, using the patterns found beside the bag, which will build their given solid. At each center, the students will need to have the nets labeled as to which solid they build.
- At the end of the rotations, the students will have drawn the common nets for a cylinder, cone, rectangular prism, triangular prism, triangular pyramid, rectangular pyramid, and cube. They will also attempt to create alternate nets for each solid.
- Display a sheet of poster paper with one of each solid drawn and labeled and its common net drawn or taped up**.** Students will have the opportunity to add their alternate nets to the poster but must first prove they are correct by showing their net and folding it for the class. Once proven, the students may tape it up on the poster paper.

- Facilitate a discussion regarding the multiple ways to create a net for each given solid noting the common characteristics the nets must have. For example, an alternate net for a cube may have the squares positioned differently. However it still has exactly 6 squares with at least 1 square on each side of the main column of squares.

Embedded Assessment (Use Teacher Resource 1 to record)

- Students should be able to determine the solid from the net and the net from the solid.
- Students should identify and prove that various solids can be built from the alternate nets that their peers created.

Reteaching/Extension:

- Reteach:
  - Option 1: Have struggling students show the nets either using Folding Geometric Shapes, real-world examples (cereal boxes, Toblerone chocolate boxes, etc.), or paper nets that can be cut and folded to reexamine the observable traits to help determine the net from the solid or solid from the net.
  - Option 2: Students can show how nets are created from the solids by tracing the outline of the solid. Begin by tracing the base and then flipping it on to each side, keeping the sides touching as it is flipped. Students will also benefit from labeling the bottom, top and sides on the net so they can see how the pieces connect when folded.
  - Option 3: Go to http://www.mathsnet.net/geometry/solid/nets.html to show students how a triangular pyramid (tetrahedron on website) and cube are formed from their nets.

- Extend:
  - Option 1: Students who are ready for an extension will be directed to http://illuminations.nctm.org/ActivityDetail.aspx?ID=84
    - At this website the students will determine which nets will create a cube.

Lesson 3

See Teacher Resource 2 for pre-lesson preparations.

Pre-Assessment

Student Resource 9

Launch

- Ask the students, "When will you use nets in real-world experiences?"
- Lists answers on poster paper.
  - Examples:
    - Folding gift boxes, wrapping presents, architecture, etc.

Teacher Facilitation/Student Application

- Student pairs will be given a calculator and grid paper, Student Resource 10. They will attempt to identify which net they will use to package the calculator and try to create appropriate measurements for their net.
- Allow the students some time to work on creating their net. Bring students back to whole group discussion and facilitate a discussion asking:
  - How did you select which net to use? How did you decide how big the net needed to be? What strategies could be used to find the most accurate dimensions for your nets?
- Model how to create the net for the calculator using an overhead projector or document viewer by finding the length, width and height of the calculator. After measuring, round up to the nearest inch so it will be easier for students to outline and cut their net using the lines on the grid paper. Have students follow along using their calculators and grid paper. Once you know the length and width of a side you are able to create that part of the net. Continue creating the net by measuring each side and then drawing the face from the measurements of the calculator.
- Distribute Student Resource 11 and poster sized grid paper, or multiple sheets of Student Resource 10 which can be taped together, to pairs of students. Go over directions of Student Resource 11 with students. Give one object to each pair of students for them to use to complete Student Resource 11.

Embedded Assessment (Use Teacher Resource 1 to record)

- Are students able to identify which net creates the appropriate packaging for the solids?
- Are the students able to accurately size the net so that it will fit, when folded, around the given object?

Reteaching/Extension

- Reteach:
  - Pull the struggling group of students and give each student a common object (i.e. tape dispenser, stack of post-its, box of staples, etc.). As a group they will work together, step by step, to create the net to fully cover the given object. Be sure to show the students each step to take in order to accurately create the measurements.
- Extend:
  - Have students select one of the nets they created. Working with their partner, they are to create a scaled drawing of that net.

Summative Assessment:

Students are to complete Student Resource 12 independently. The students will be demonstrating their understanding of solids and nets by identifying the attributes of solids

using learned vocabulary, recognizing how nets construct solids and how solids are constructed from nets. Answer keys can be found on Teacher Resources 9a and 9b.

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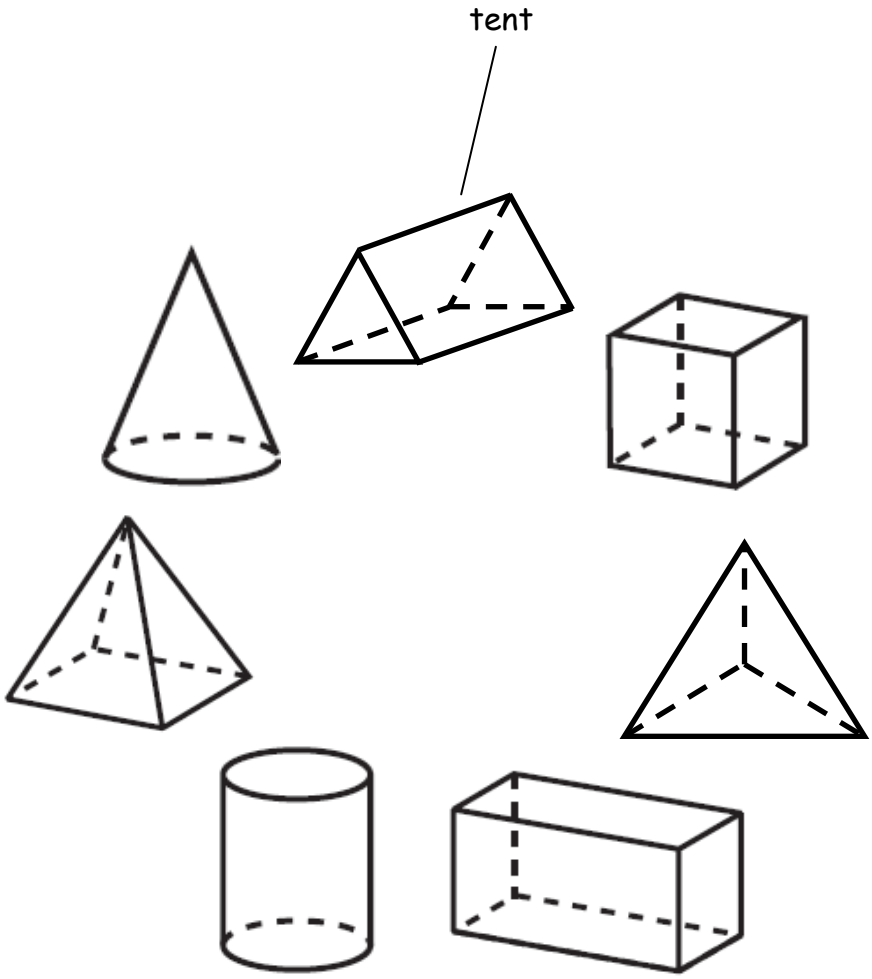
Student Resource 1

Name _____ Date _____

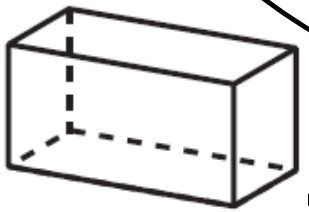
Directions: Look at the solids below. As you take your nature walk or walk around your classroom and school, list the real-world examples of solids that you see. When you return to your classroom continue to brainstorm and add these additional objects below.

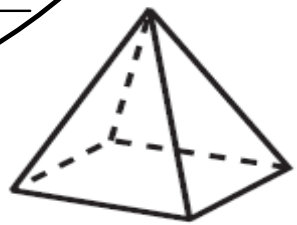


Name_____ Date_____

Rectangular Prism

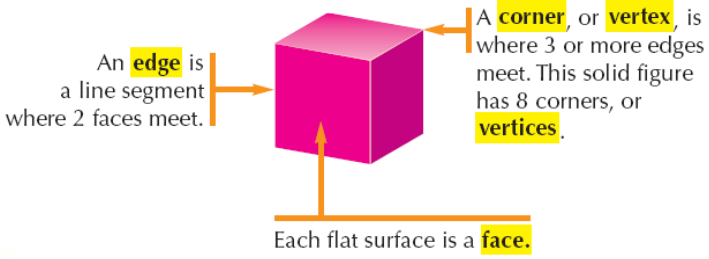
Rectangular Pyramid





Name _____ Date _____

Directions:
Record the number of faces, edges, and vertices for each of the solid figures below.



Solid Figures	# of Faces	# of Edges	# of Vertices	Shape of faces
Cube				
Rectangular prism				
Rectangular pyramid				
Triangular pyramid				
Triangular prism				
Cylinder				
Cone				

Name_____ Date_____

Mystery Solids

Directions: Use your baggie of marshmallows and coffee stirrers to construct each solid by the attributes listed below. Identify the solid you have built and sketch a drawing. Do not repeat any answers.

1. Build a solid that has exactly 6 square faces.

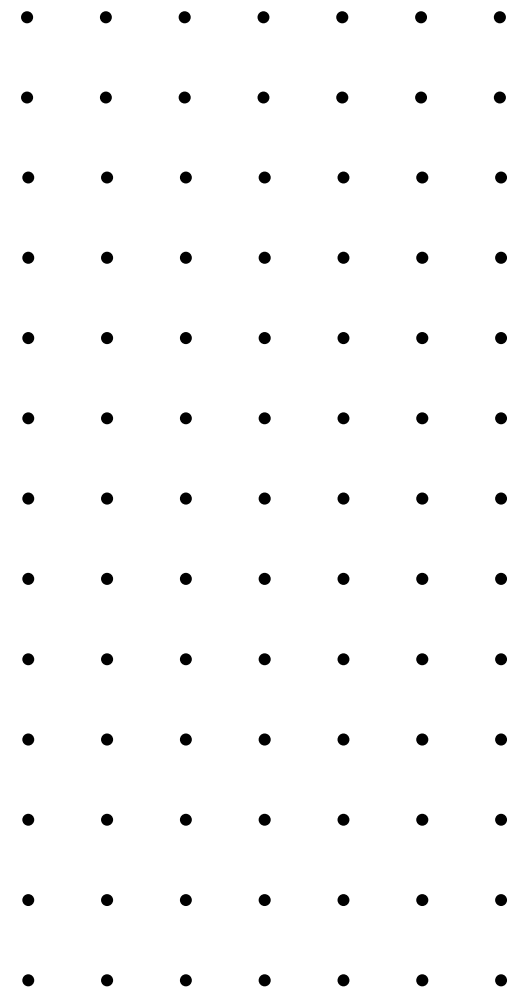
   Solid Figure: _____

2. Build a solid that has exactly 1 square face and 4 triangular faces.

   Solid Figure: _____

3. Build a solid that has exactly 3 rectangular faces and 2 triangular faces.

   Solid Figure: _____



4. Build a solid that has exactly 8 vertices and 6 faces.

Solid Figure: _____

5. Build a solid that has exactly 5 corners and 5 faces.

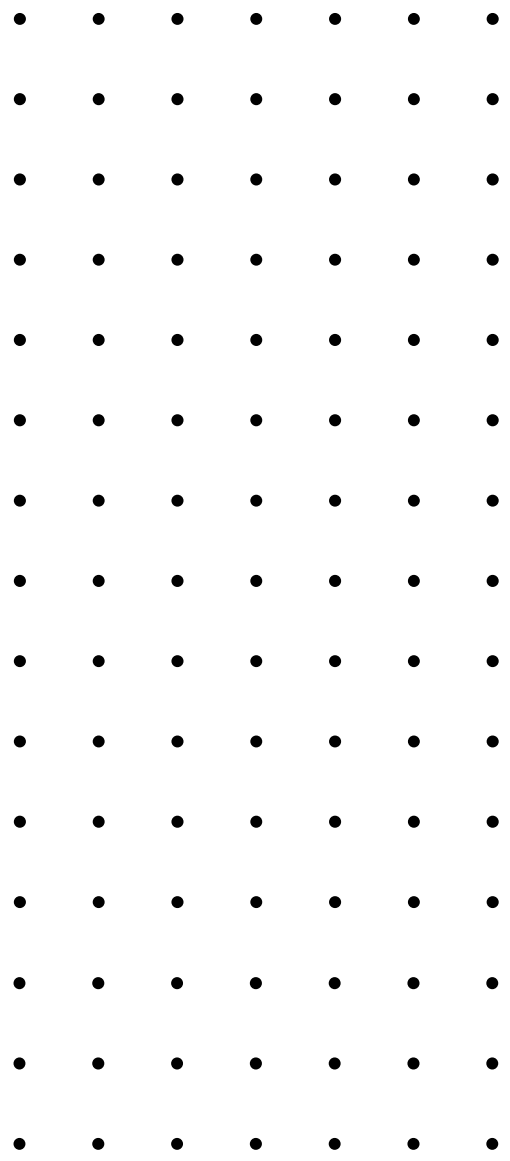
Solid Figure: _____

6. How many different shaped solids can you make that have exactly 12 edges?

Solid Figure: _____

7. Build a solid that has exactly 6 edges and 4 triangular faces.

Solid Figure: _____



I am a solid.
I have 5 faces.
I have 6 vertices.
2 of my faces are triangles, the other 3 are rectangles.

What am I?

_____

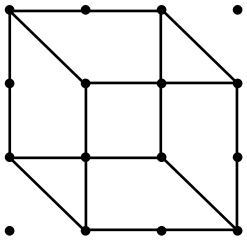
Student Resource 5

I am a solid.
I have 5 faces.
I have 6 vertices.
2 of my faces are triangles, the other 3 are rectangles.

What am I?

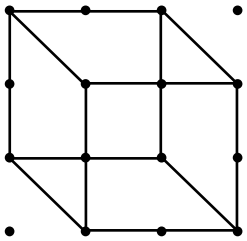
_____

Name _____ Date _____

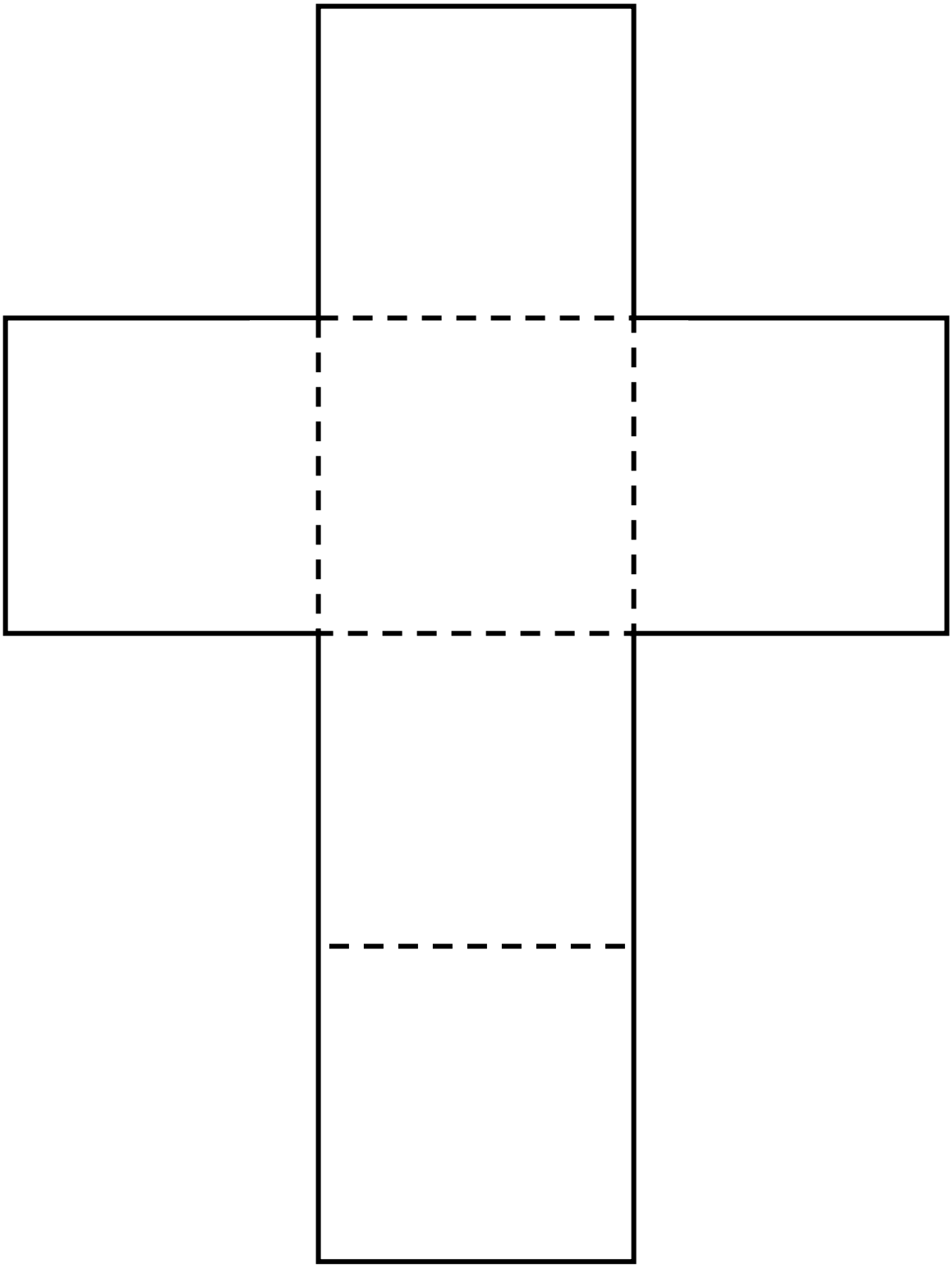


Student Resource 6

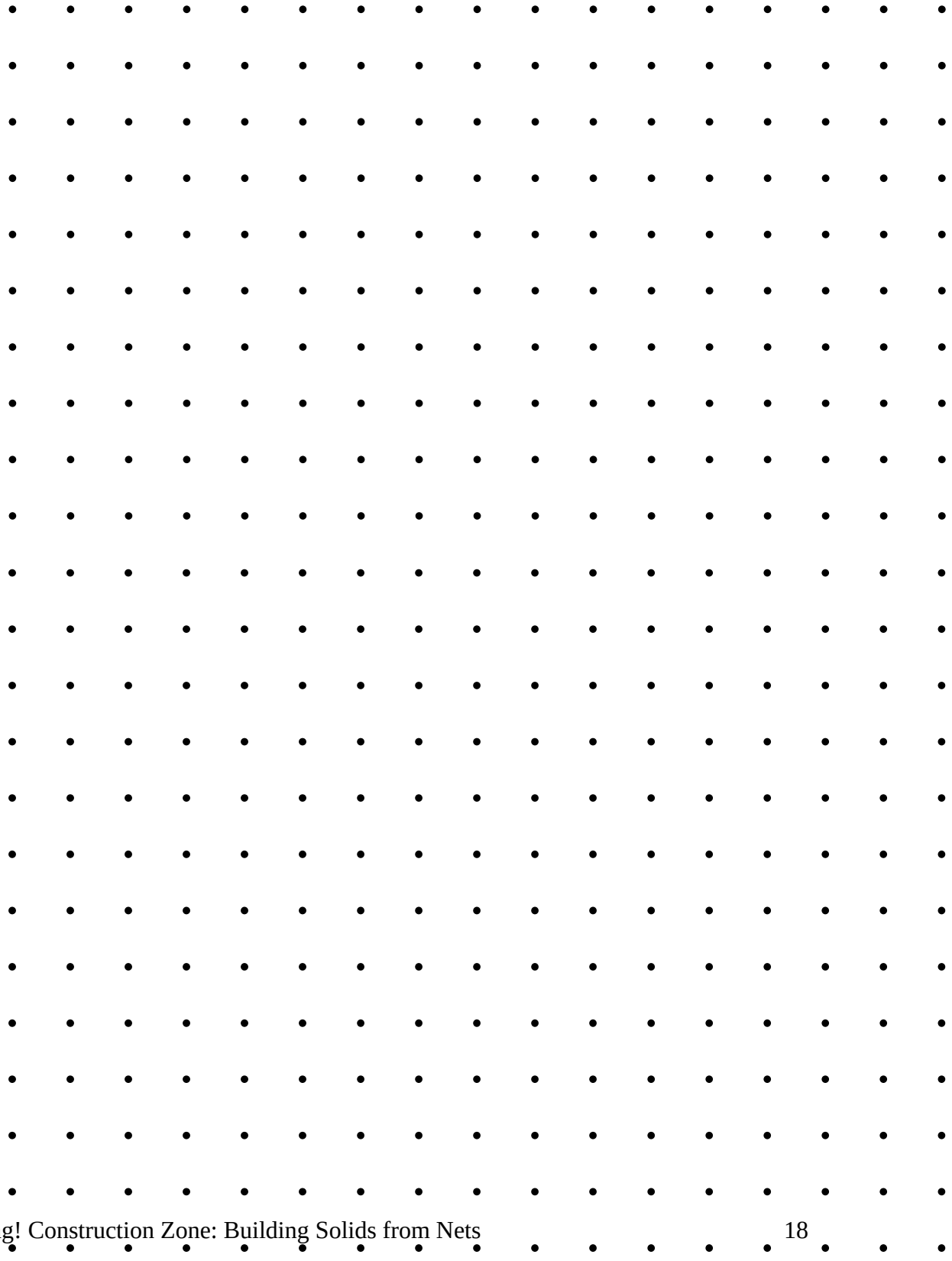
Name _____ Date _____

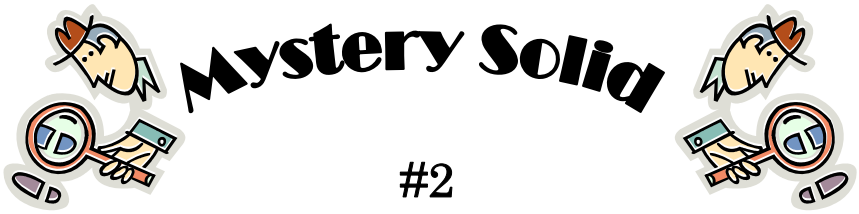


Cube Net



Name _____ Date _____



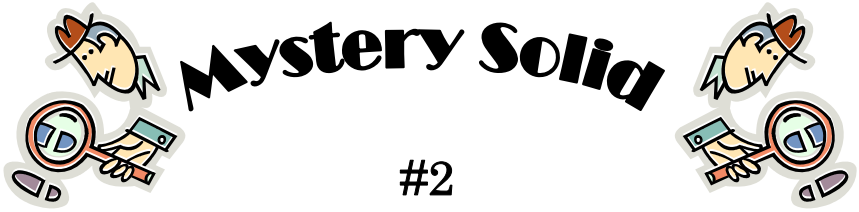


I am a net.
I am made up of 6 similar shapes.
I am not made up of squares.
I create a prism.

What net am I?

_____

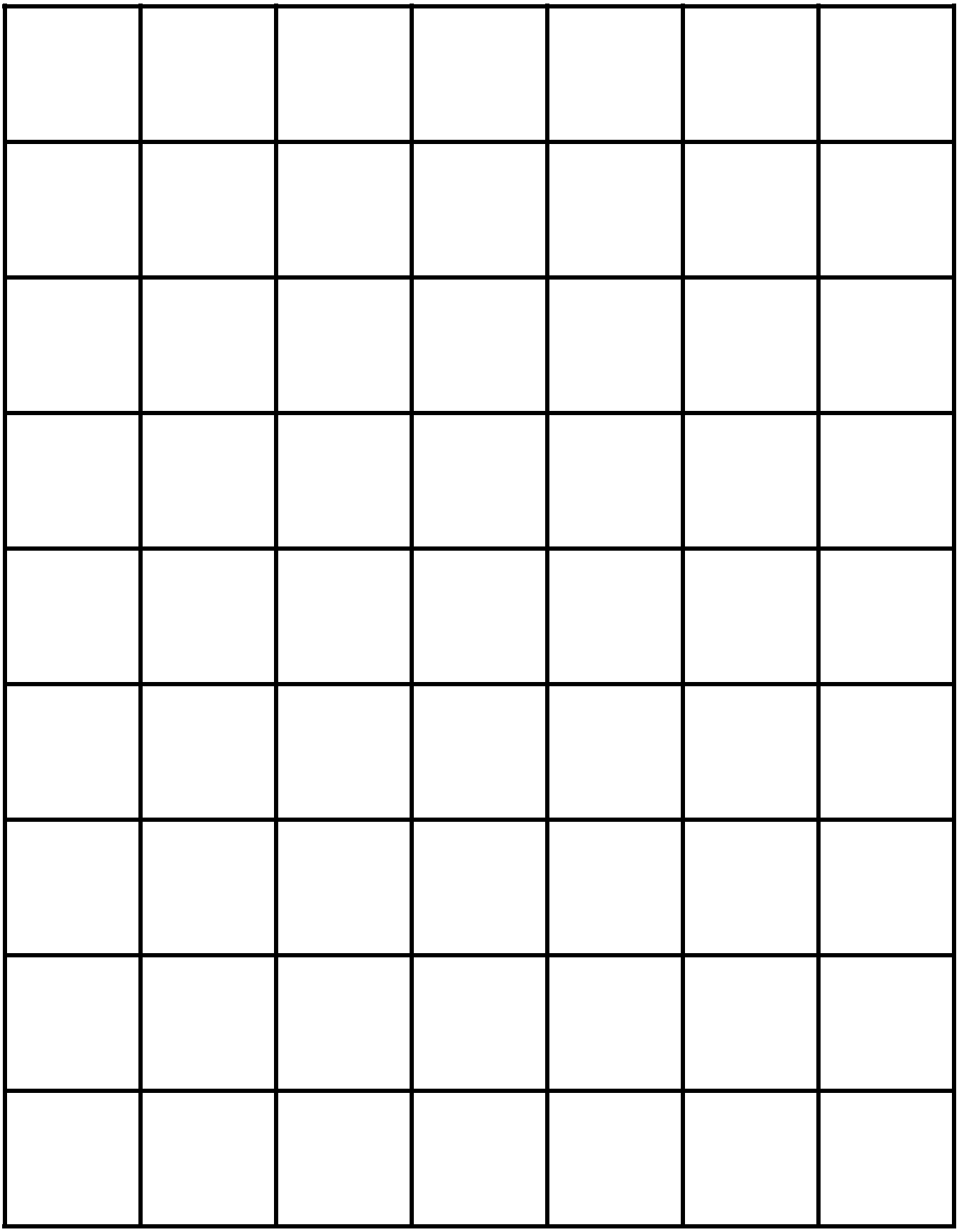
Student Resource 9



I am a net.
I am made up of 6 similar shapes.
I am not made up of squares.
I create a prism.

What net am I?

_____



Name _____ Date _____

Real Life Nets

You have been invited to your best friend's birthday party! You and your partner are responsible for packaging the gift in one of the solid figures that you have studied over the last few days. Follow the steps below in order to create the net for your packaging!

With your partner, select your object: _____

Which solid will you create to package this item? _____

Measure the 3-dimensions of your object. First find the exact measurement, and then round up your measurements to the nearest whole inch.

Exact Dimensions:	Rounded Dimensions:
Height: _____in. Width: _____in. Length: _____in.	Height: _____in. Width: _____in. Length: _____in.

Sketch out a rough draft of your net below. Label the dimensions of each side.

Draw the net you have created on the poster size grid paper. Be sure to check your measurements against your rough draft.

Carefully cut out your net and fold it to test your design.

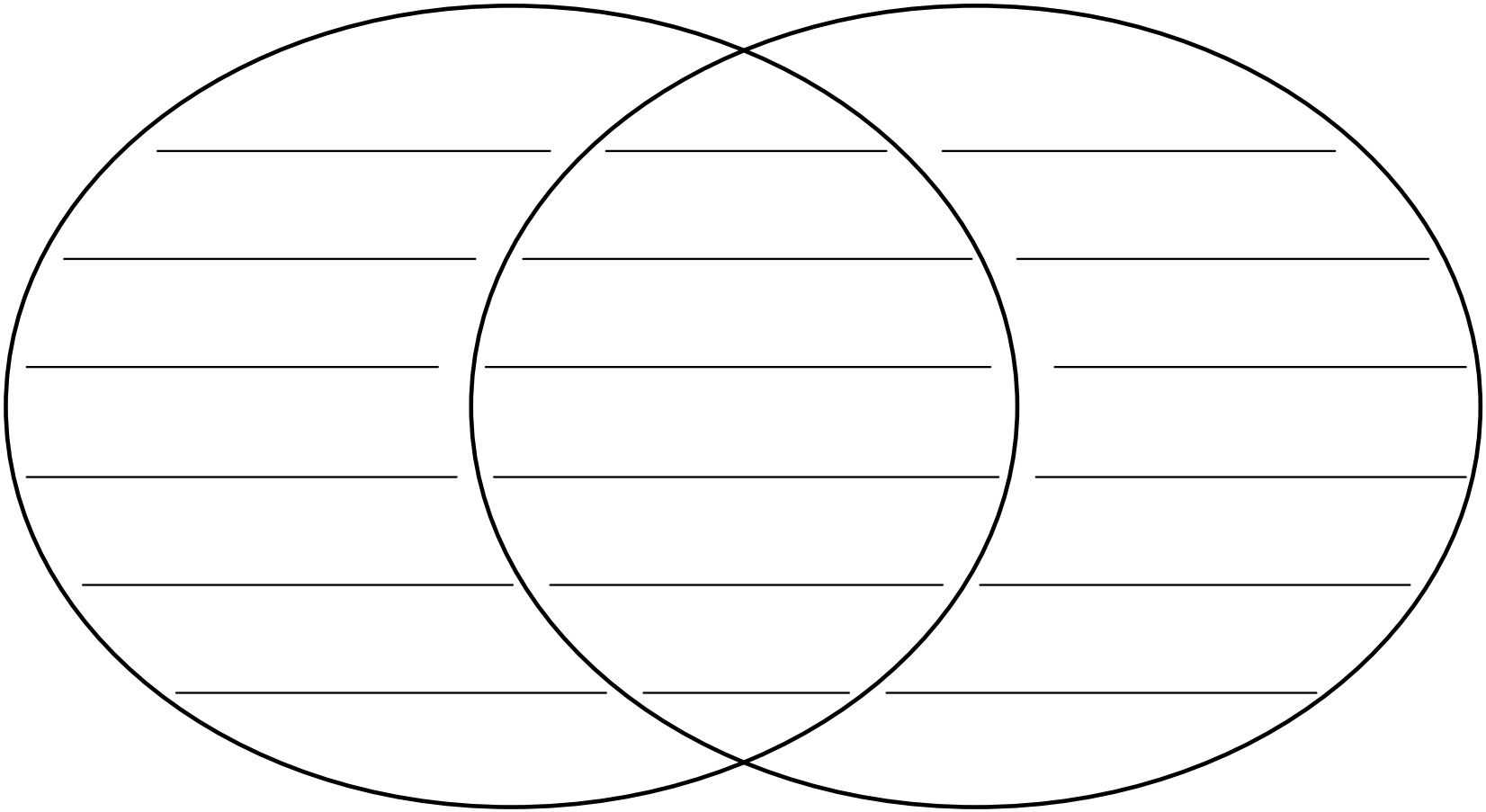
Name_____ Date_____

Summative Assessment

Directions: Compare each of the solid figures in the Venn diagram below. Be sure to use mathematical vocabulary and include all attributes of each figure.

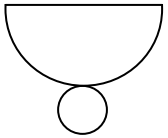
Triangular Prism

Triangular Pyramid



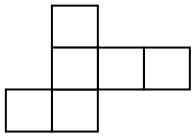
Directions: Use the word bank below to name the solid each net can be folded into. You may use some words more than once and others not at all.

cube	rectangular prism	triangular prism
cone	triangular pyramid	square pyramid
cylinder		



1. _____

_____



2. _____

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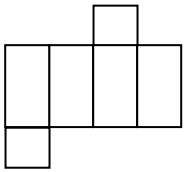

3. _____

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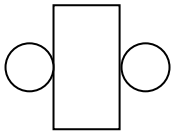

4. _____

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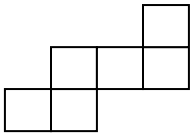

5. _____

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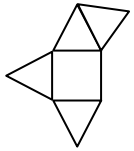
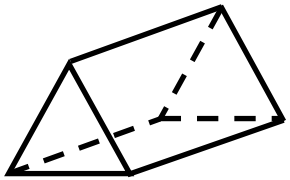


6. _____

_____

Directions: Draw a net in the box below that can be folded to construct a triangular prism.



Student Name	Lesson 1				Lesson 2				Lesson 3			
	Ability to determine the solid from the net and the net from the solid?	Ability to identify the proof solids can be built from the alternate nets their peers created?	Need reteaching?	Worked on extension?	Ability to identify which net creates the appropriate packaging for the solids?	Ability to accurately size the net so that it will fit, when folded, around the given object?	Need reteaching?	Worked on extension?	Ability to identify which net creates the appropriate packaging for the solids?	Ability to accurately size the net so that it will fit, when folded, around the given object?	Need reteaching?	Worked on extension?

Pre-Lesson Preparations

**HINT: Using cardstock when creating nets may be easier than using regular paper!

Lesson 1

- Set up computer to LCD projector or alternate way for students to view the following website: http://www.harcourtschool.com/activity/solid_figure_factory/
- Create a cube using marshmallows and coffee stirrers (**HINT: Allowing marshmallows to become slightly stale makes them easier to manipulate).
- Fill baggies with 15 small marshmallows or gumdrops and about 10 halves and 5 whole coffee stirrers (Enough for one baggie per student).

Lesson 2

- Cut out 2 nets of each solid. Leave one as a net and fold up the other into its solid form.
- Cut out patterns for the nets. **Using cardstock may make it easier for students to trace during the activity.
- Create 7 stations as described below:

Station Solid	Place solid:	Place net and pattern
Cone	In bag	Beside bag
Cylinder	In bag	Beside bag
Triangular Pyramid	In bag	Beside bag
Cube	Beside bag	In bag
Triangular Prism	Beside bag	In bag
Rectangular Pyramid	Beside bag	In bag
Rectangular Prism	Beside bag	In bag

Lesson 3

- Collect items (at minimum 1 item per 2 students) for the students to build packaging for. Items should be large enough to easily measure but small enough to easily be wrapped in one piece of poster paper. Examples: stapler, stuffed animal, book, scissors, tape dispenser, glue bottle, etc.

Name_____ Date_____

Rectangular Prism

Rectangular Pyramid

sides made of squares

6 faces

12 edges

8 vertices

3-Dimensional

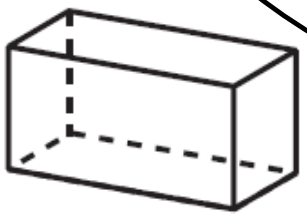
rectangle base

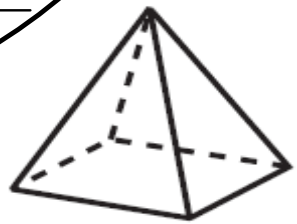
sides made of triangles

5 faces

8 edges

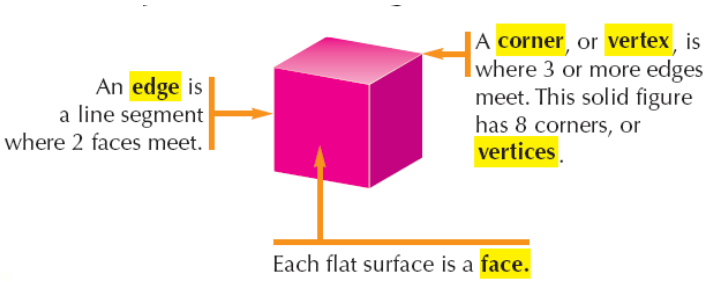
5 vertices

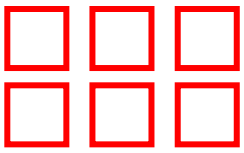
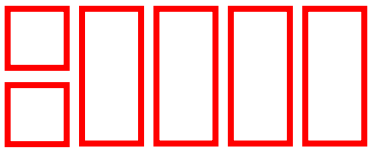
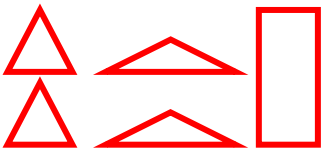
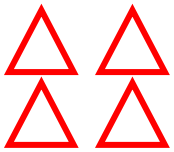
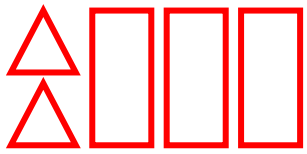
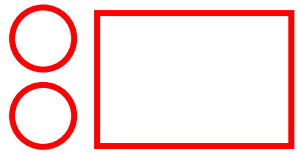




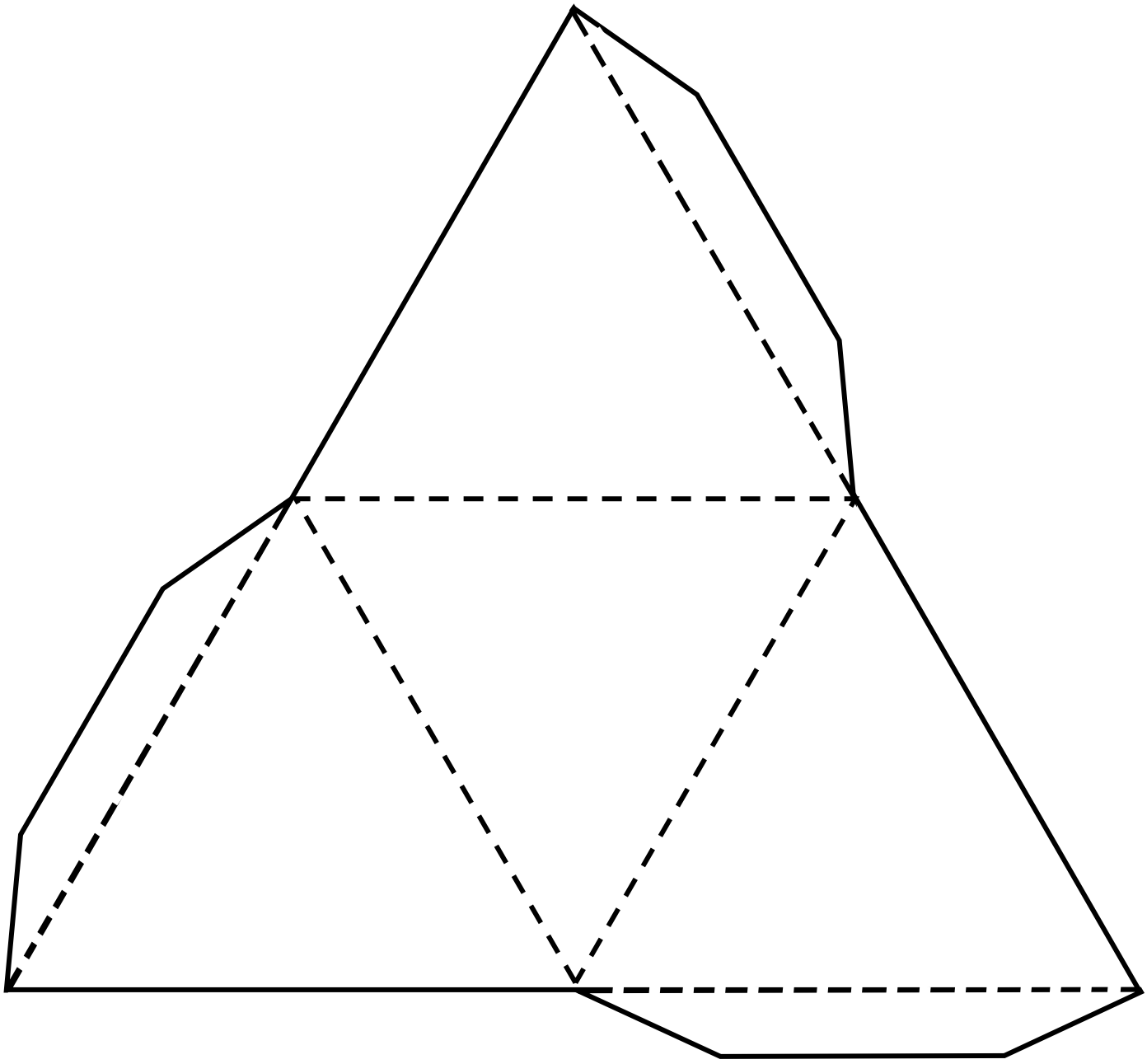
Name _____ Date _____

Directions:
Complete the faces, edges, and vertices for each of the solid figures below.

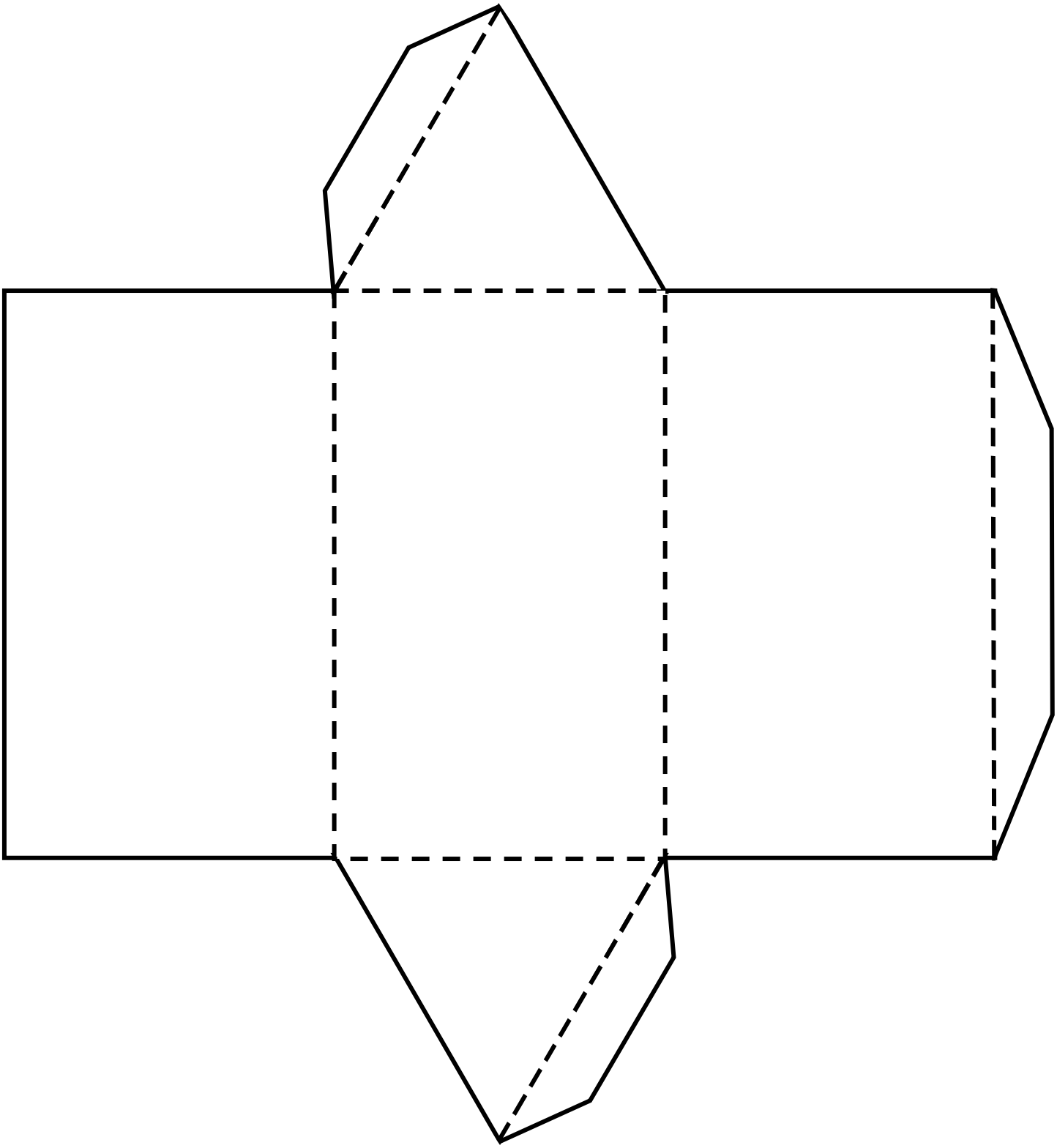


Solid Figures	# of Faces	# of Edges	# of Vertices	Shape of faces
Cube	6	12	8	
Rectangular prism	6	12	8	
Rectangular pyramid	5	8	5	
Triangular pyramid	4	6	4	
Triangular prism	5	9	6	
Cylinder	2	0	0	
Cone	1	0	1	

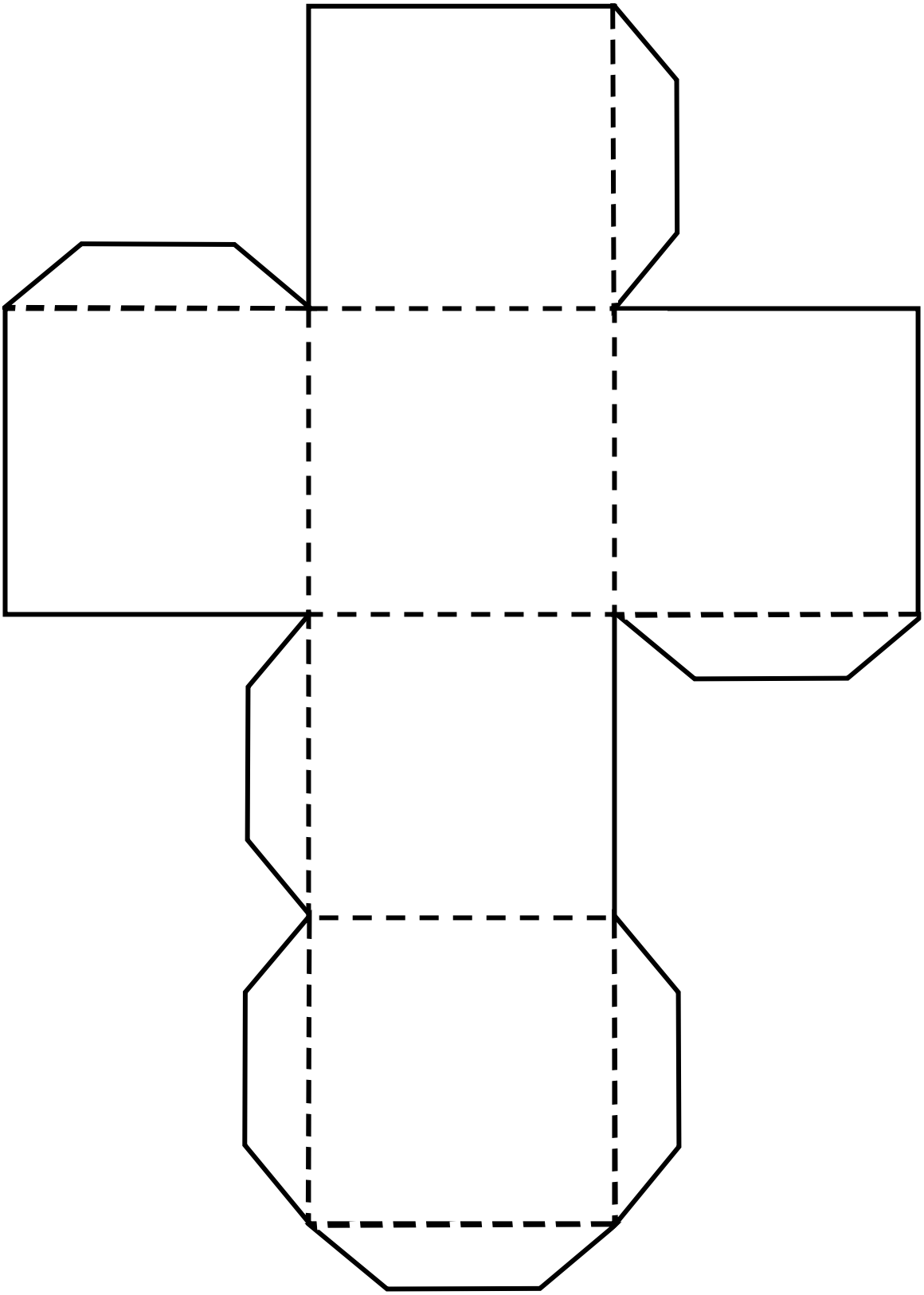
Triangular Pyramid Net



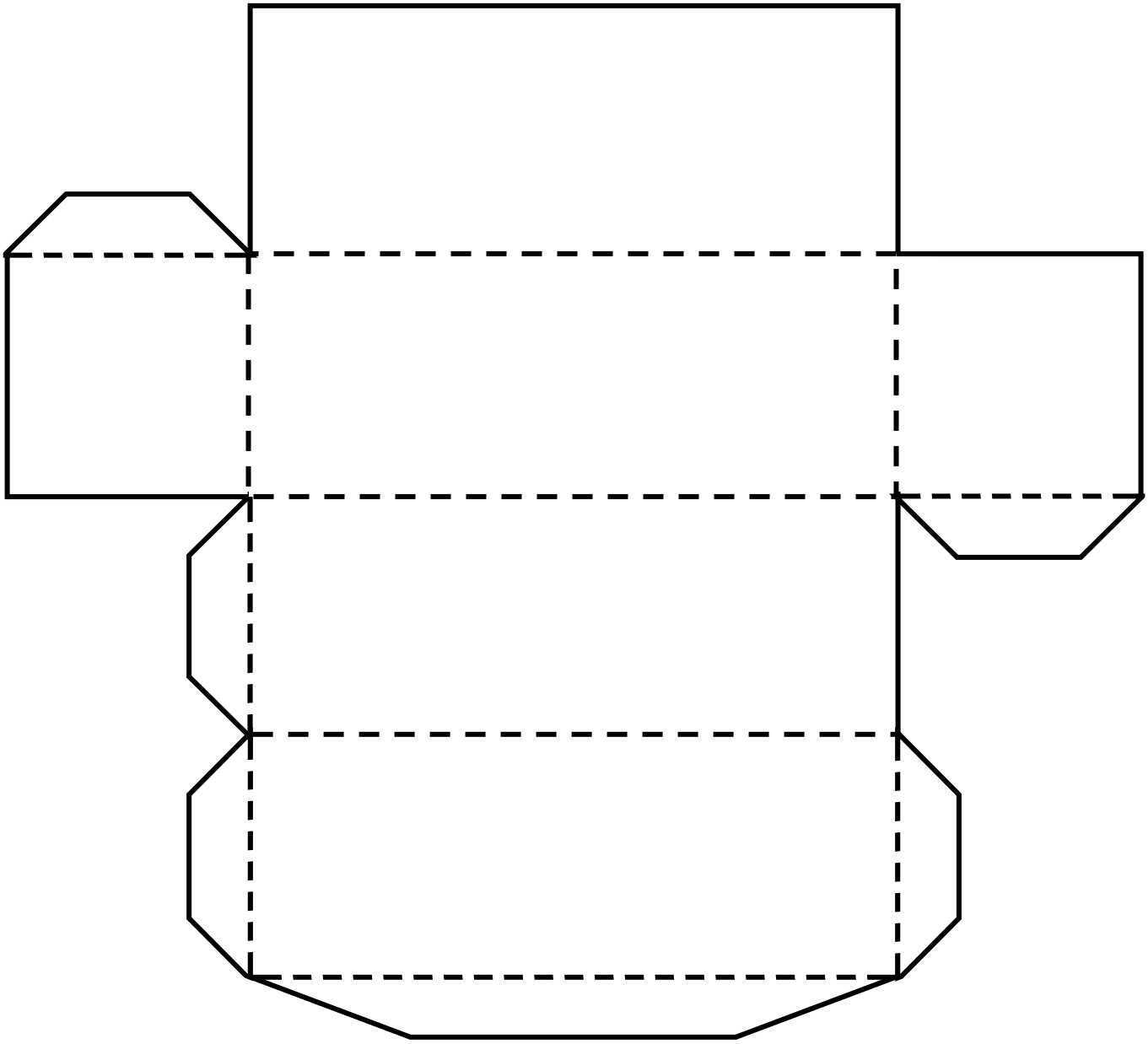
Triangular Prism Net



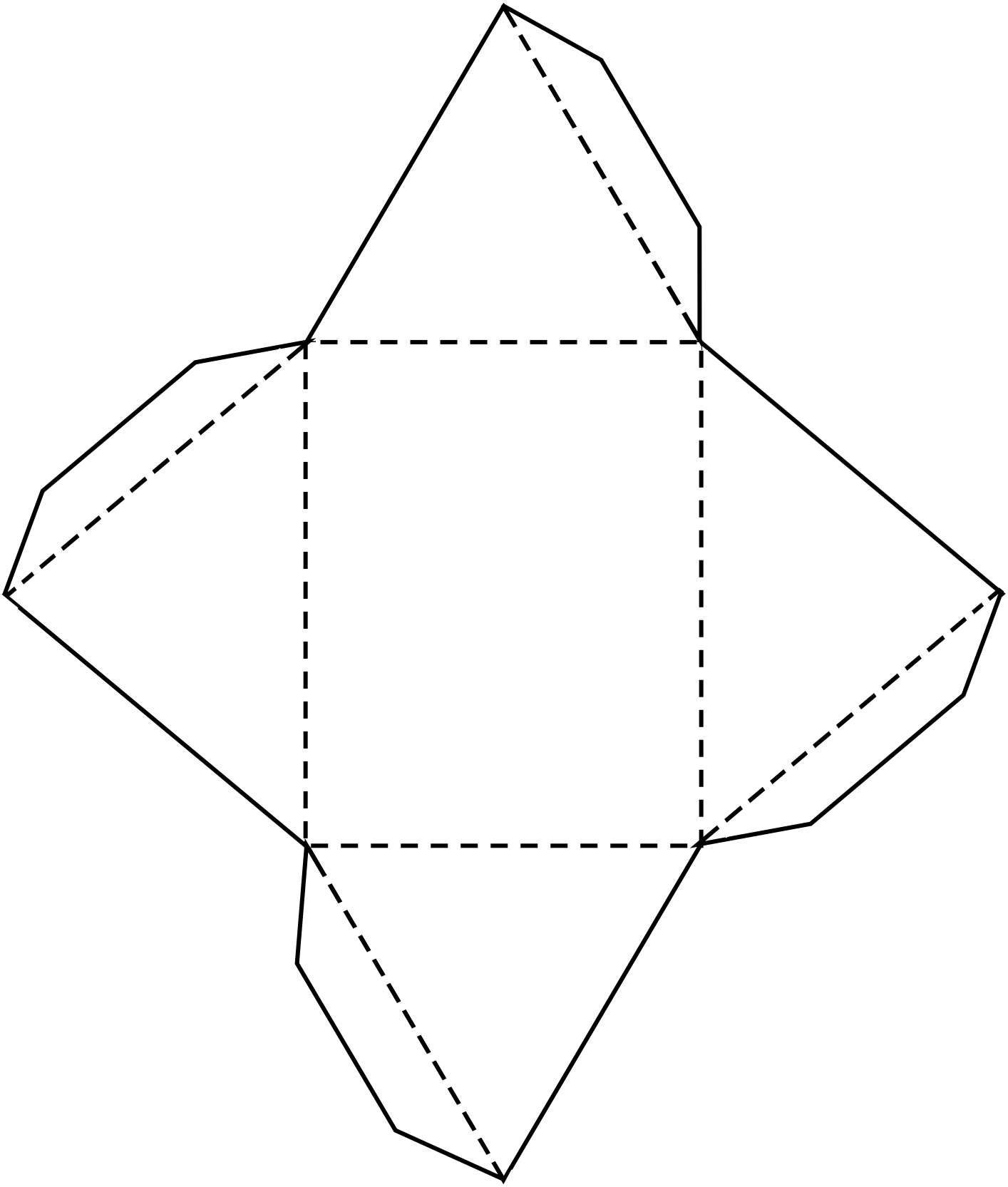
Cube Net



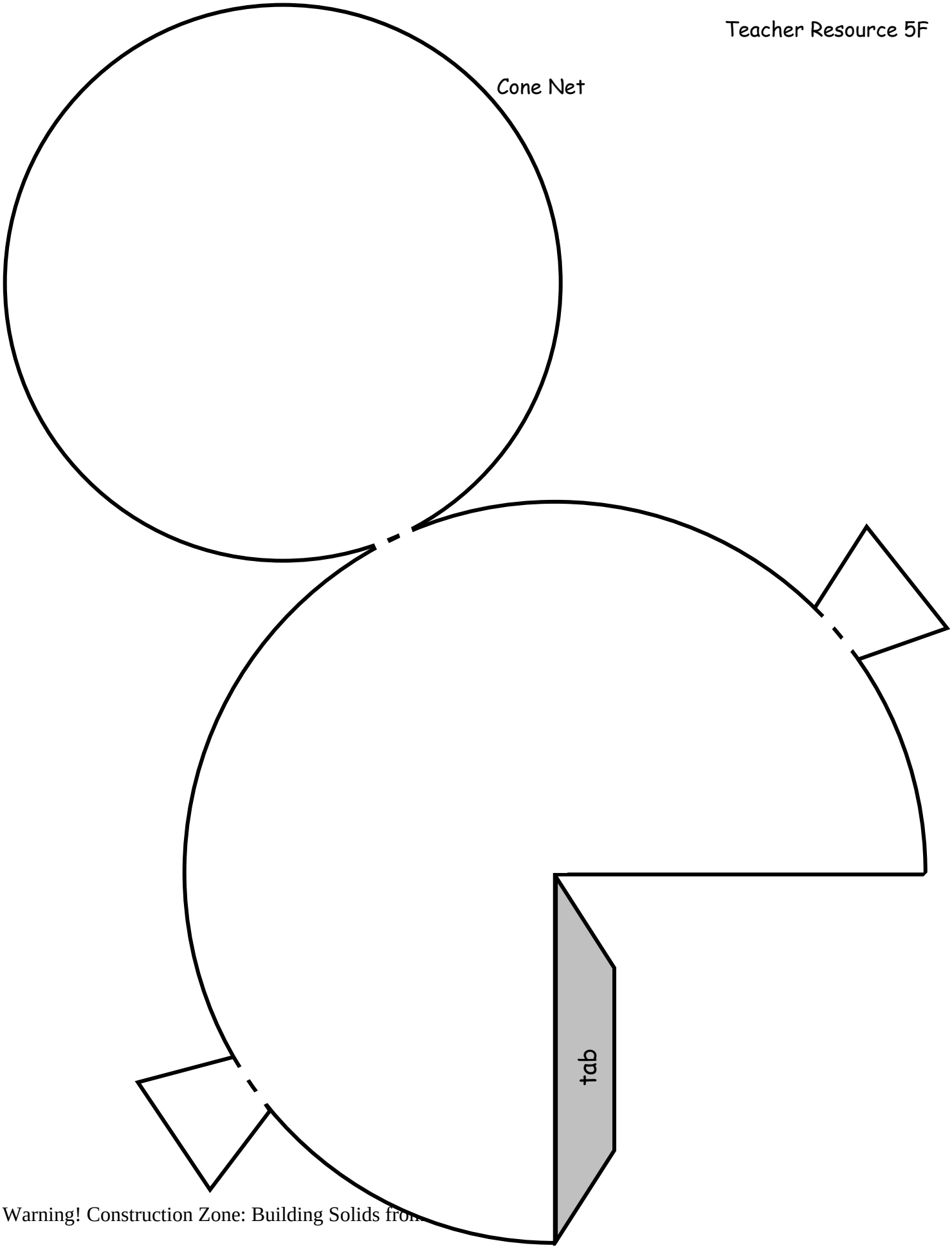
Rectangular Prism Net



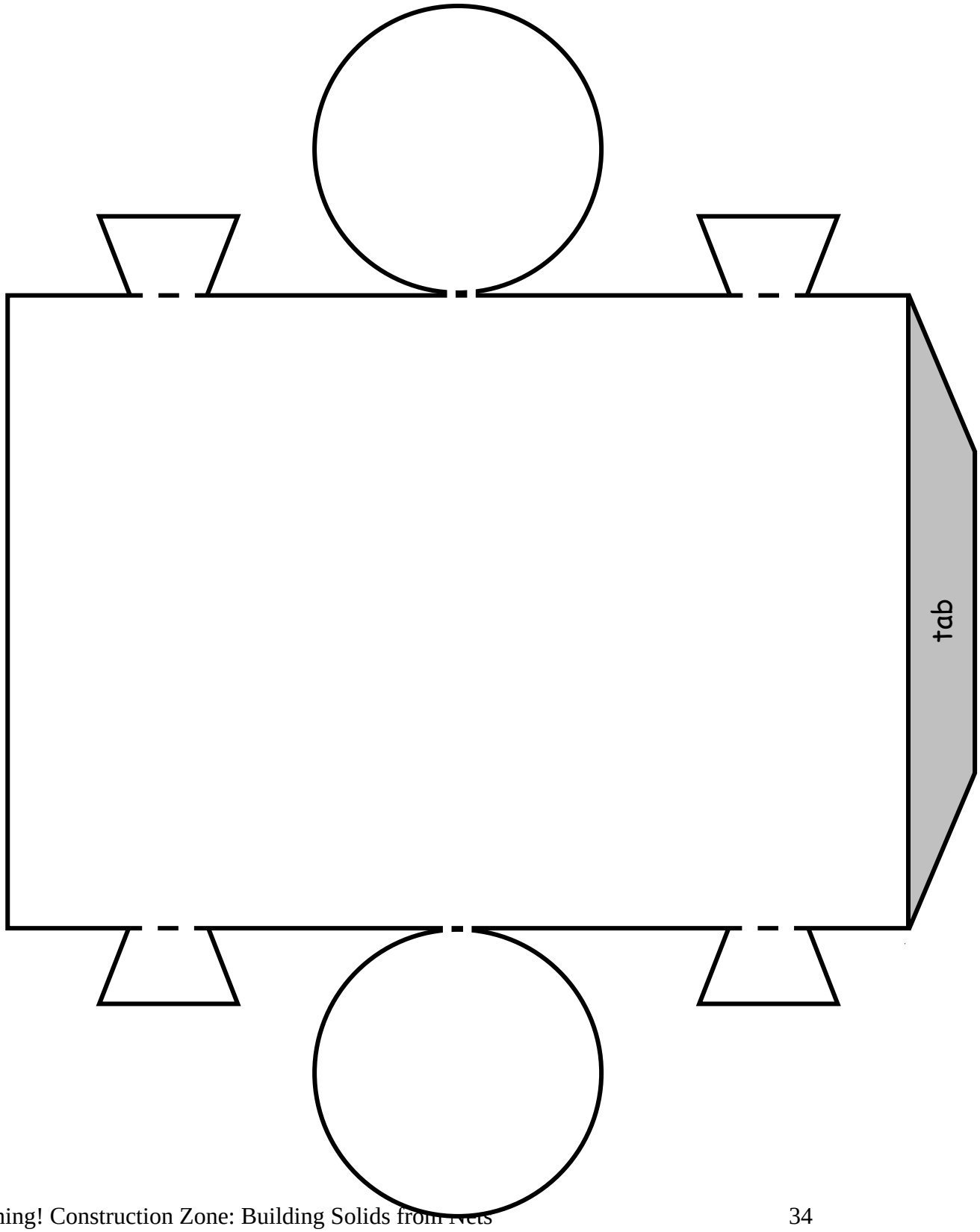
Rectangular Pyramid Net



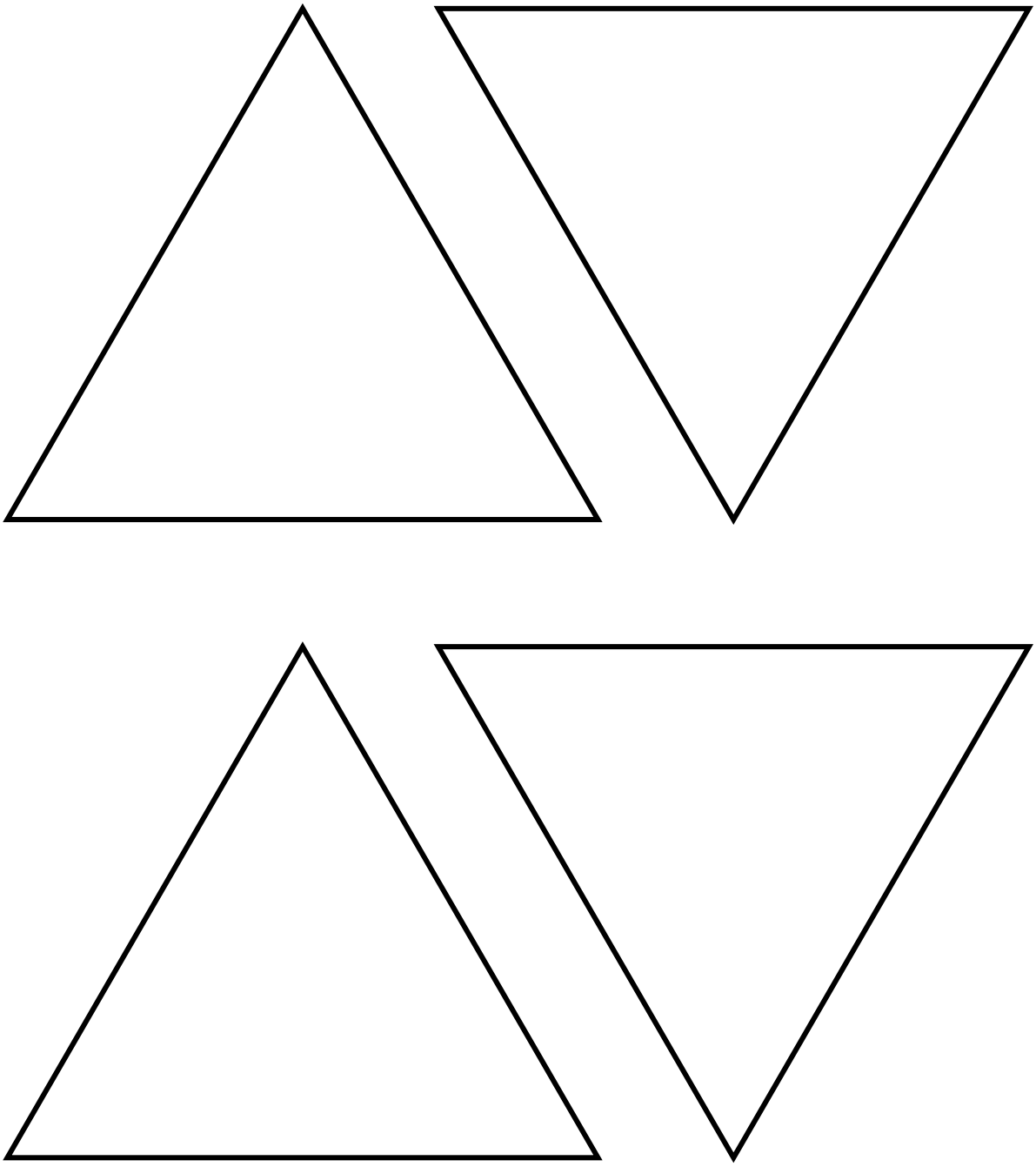
Cone Net



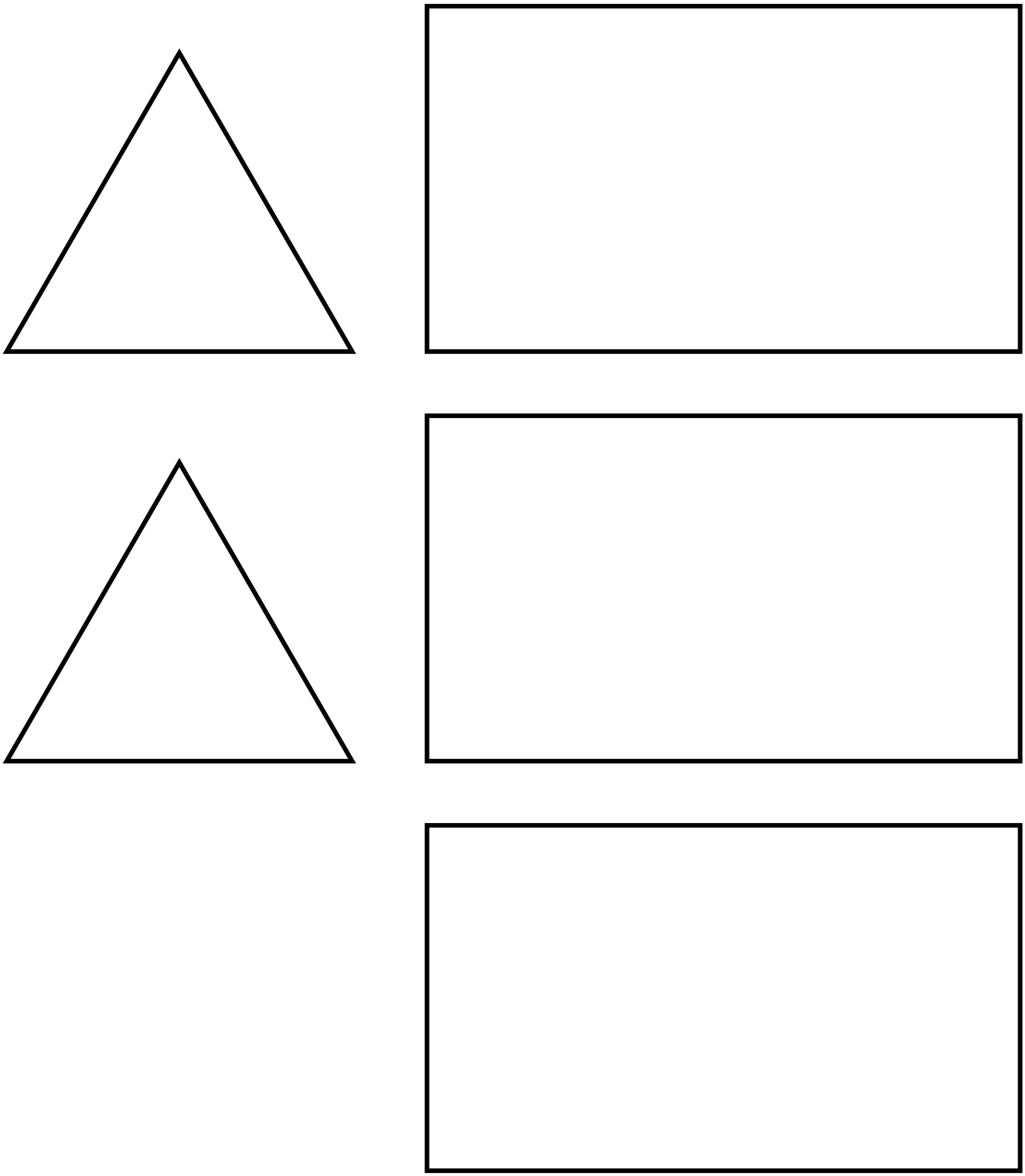
Cylinder Net



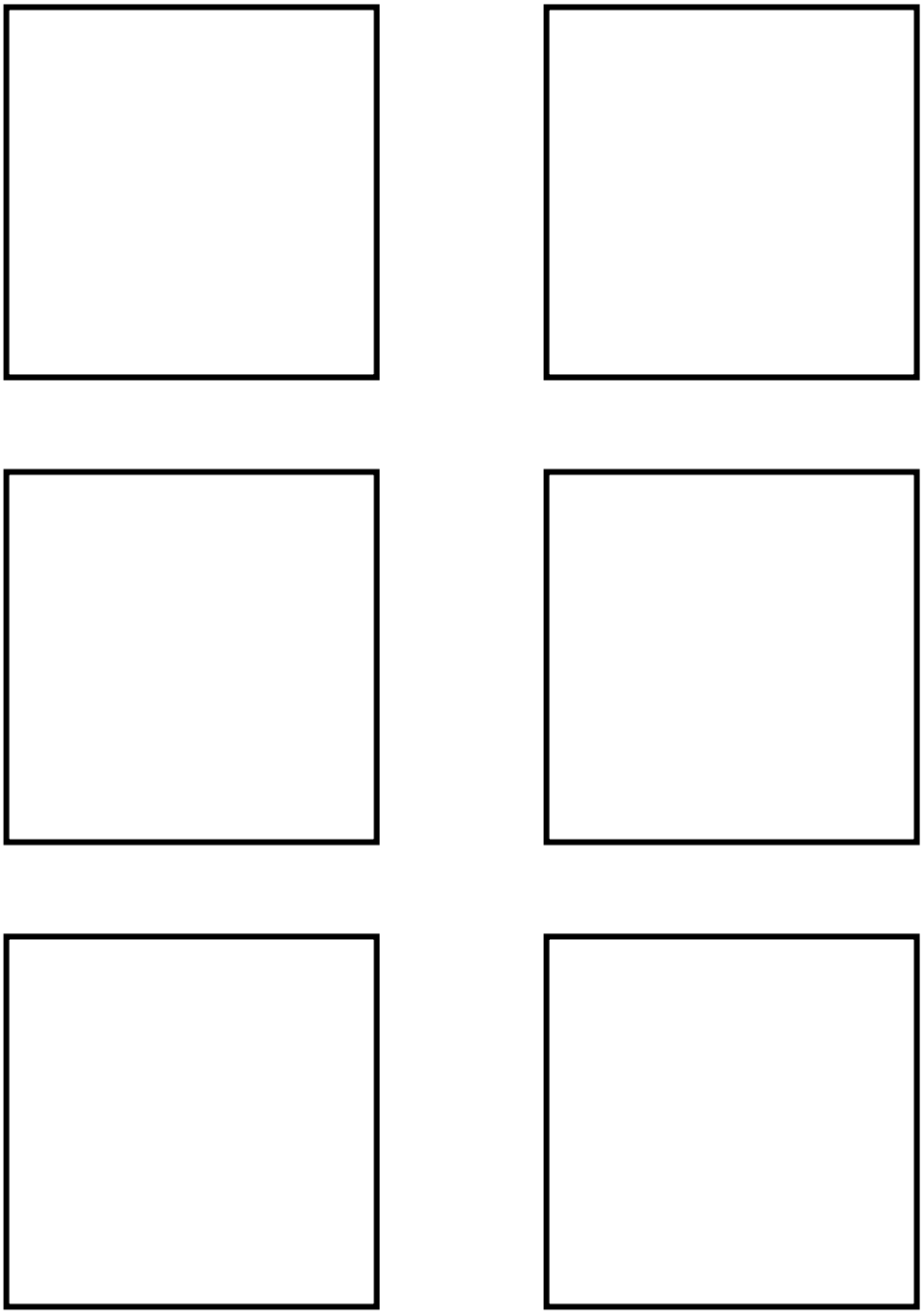
Pattern for Triangular Pyramid Net



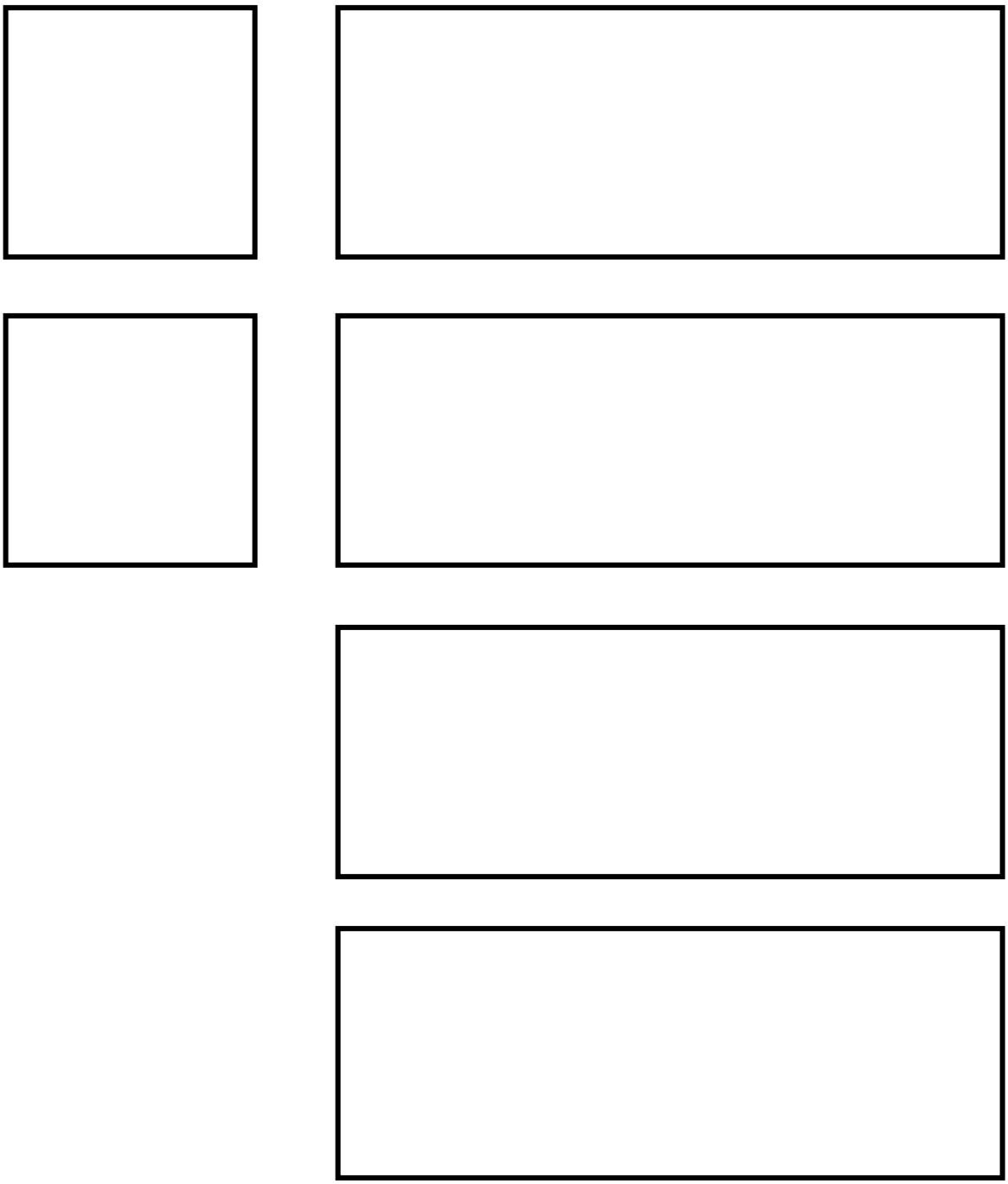
Pattern for Triangular Prism Net



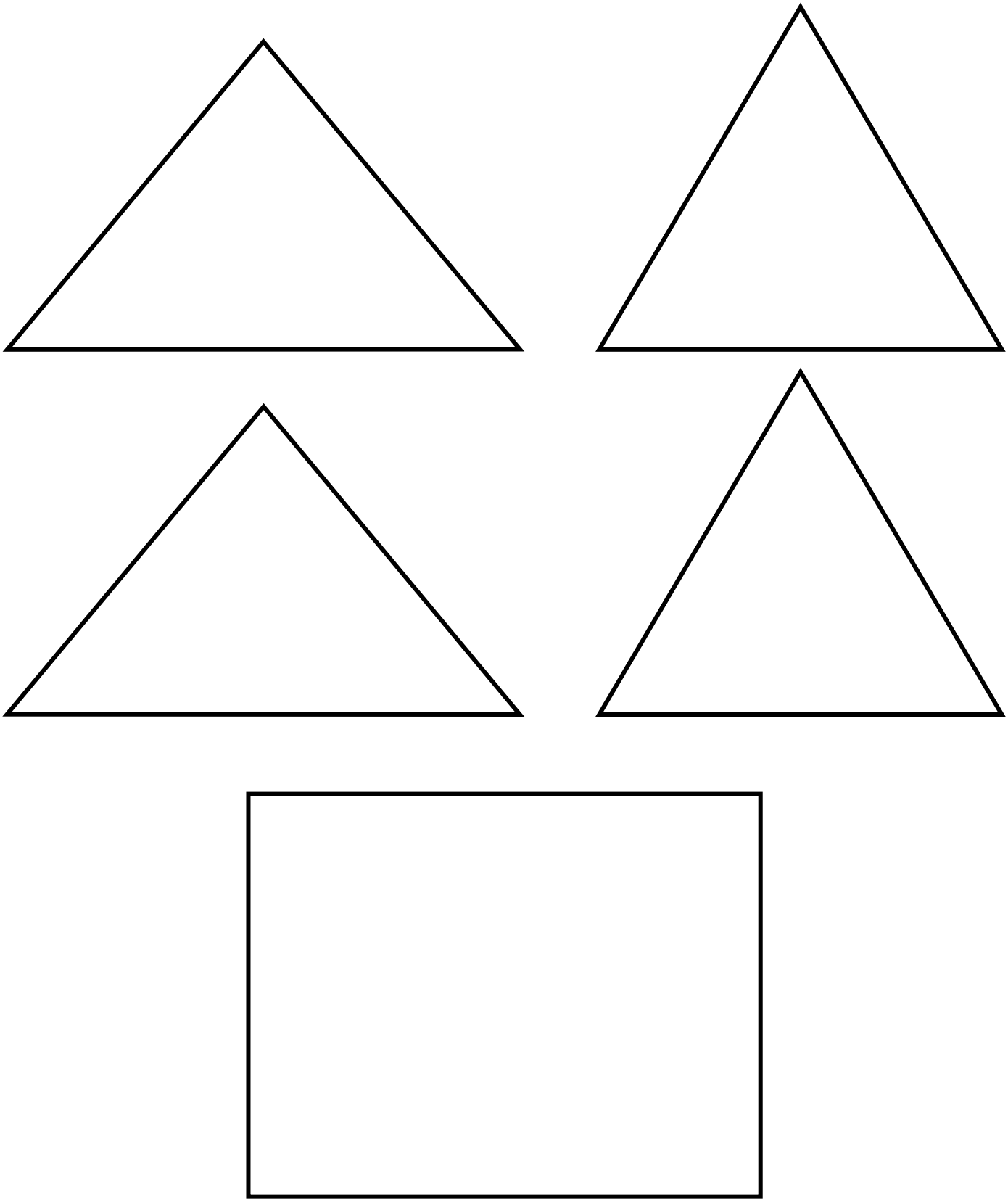
Pattern for Cube Net



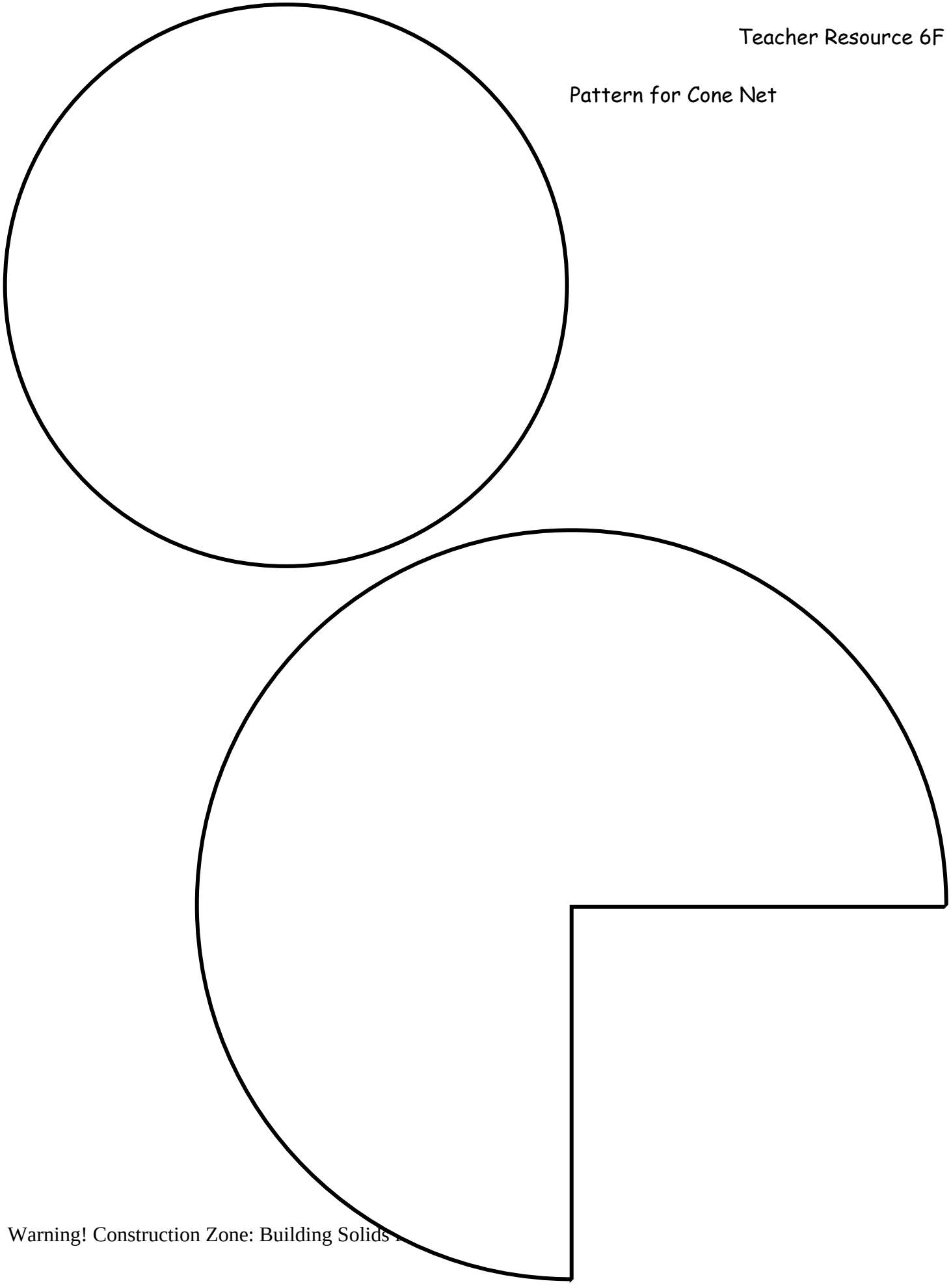
Pattern for Rectangular Prism Net



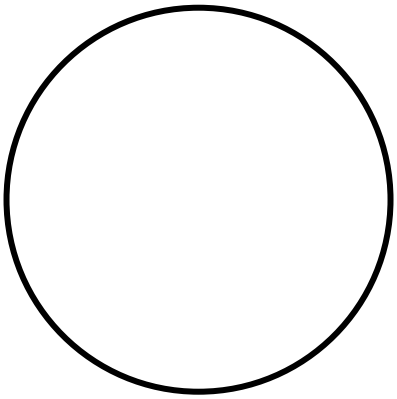
Pattern for Rectangular Pyramid Net

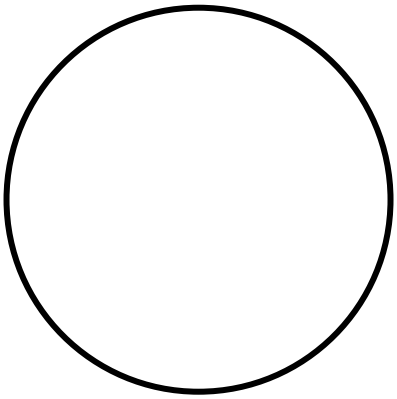


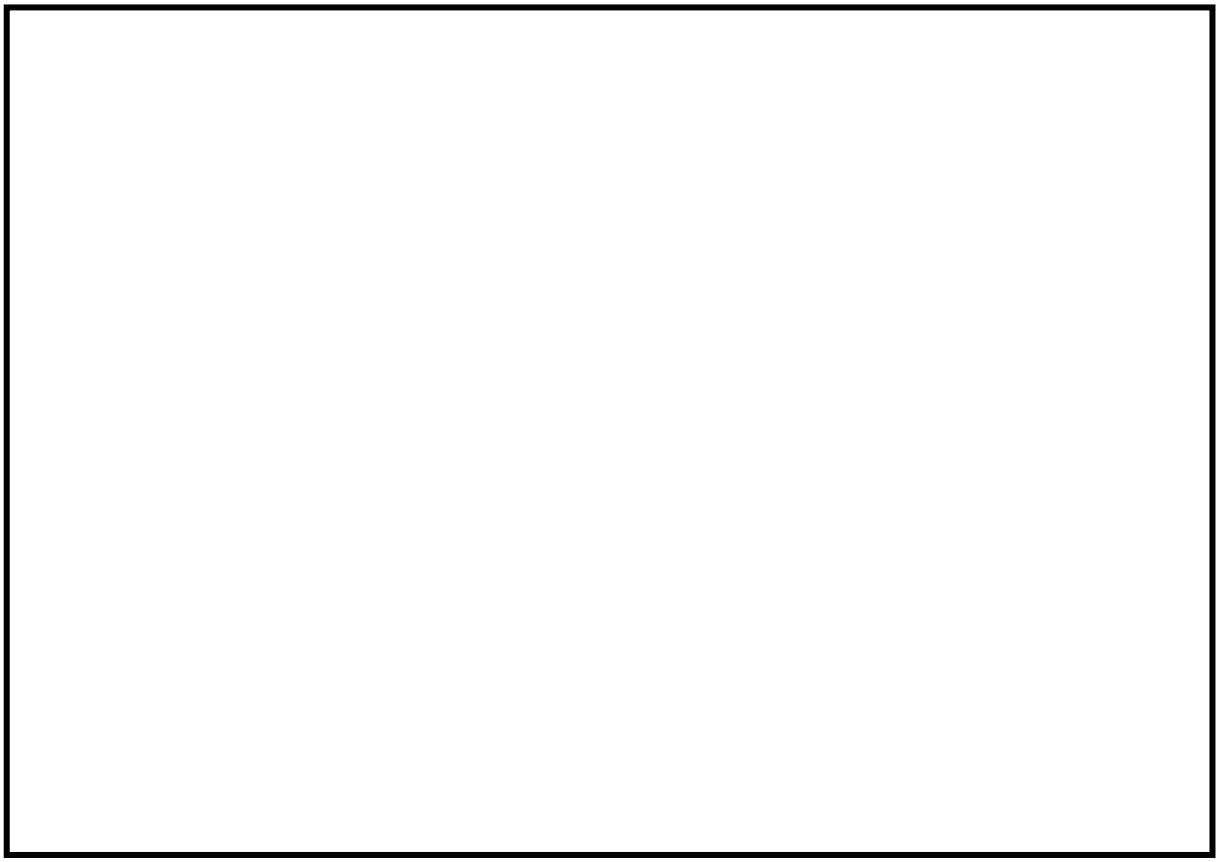
Pattern for Cone Net



Pattern for Cylinder Net





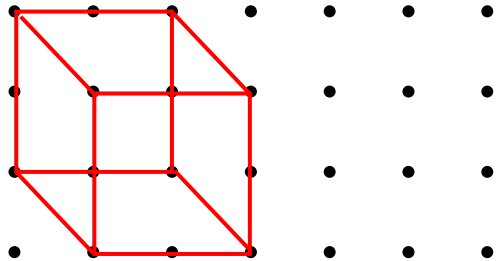


Name_____ Date_____

Mystery Solids

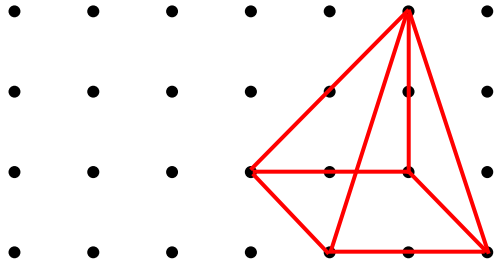
Directions: Use your baggie of marshmallows and coffee stirrers to construct each solid by the attributes listed below. Identify the solid you have built and sketch a drawing. Do not repeat any answers.

2. Build a solid that has exactly 6 square faces.



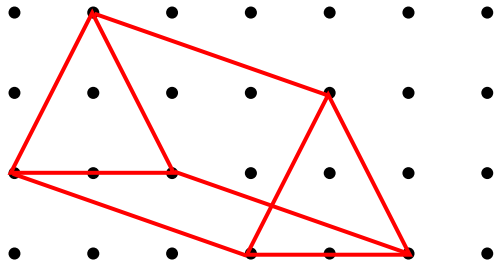
Solid Figure: **cube**

2. Build a solid that has exactly 1 square face and 4 triangular faces.



Solid Figure: **square pyramid**

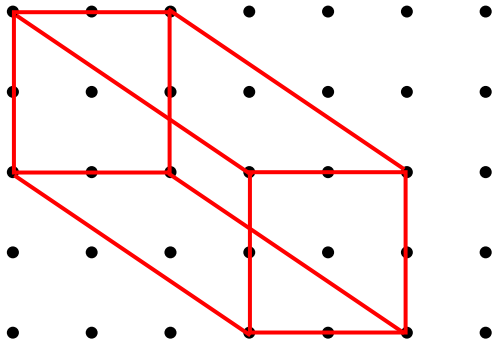
3. Build a solid that has exactly 3 rectangular faces and 2 triangular faces.



Solid Figure: **triangular prism**

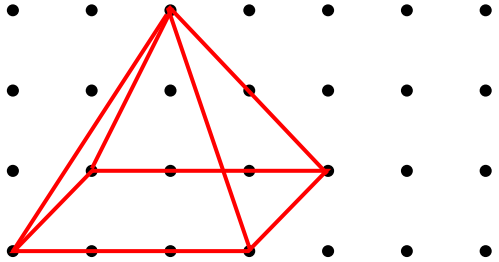
4. Build a solid that has exactly 8 vertices and 6 faces.

Solid Figure: **rectangular prism**



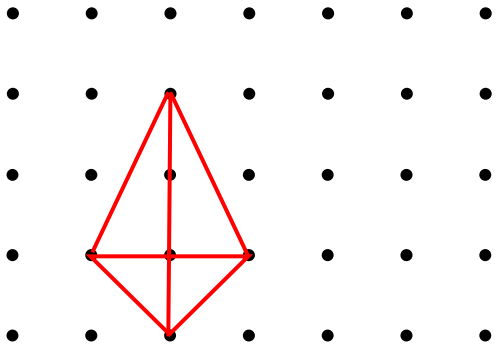
5. Build a solid that has exactly 5 corners and 5 faces.

Solid Figure: **rectangular pyramid**



6. How many different shaped solids can you make that have exactly 12 edges?

Solid Figure: **two different solids**



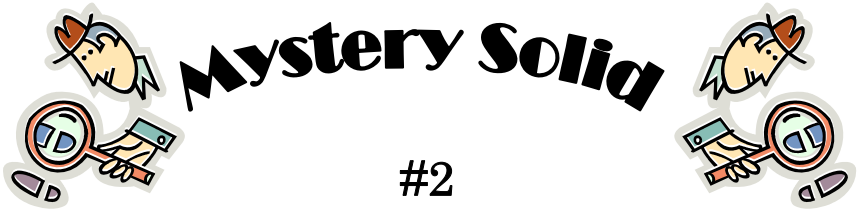
7. Build a solid that has exactly 6 edges and 4 triangular faces.

Solid Figure: **triangular pyramid**

I am a solid.
I have 5 faces.
I have 6 vertices.
2 of my faces are triangles, the other 3 are rectangles.

What am I?

I am a triangular prism.



I am a net.
I am made up of 6 similar shapes.
I am not made up of squares.
I create a prism.

What net am I?

I am a net of a rectangular prism.

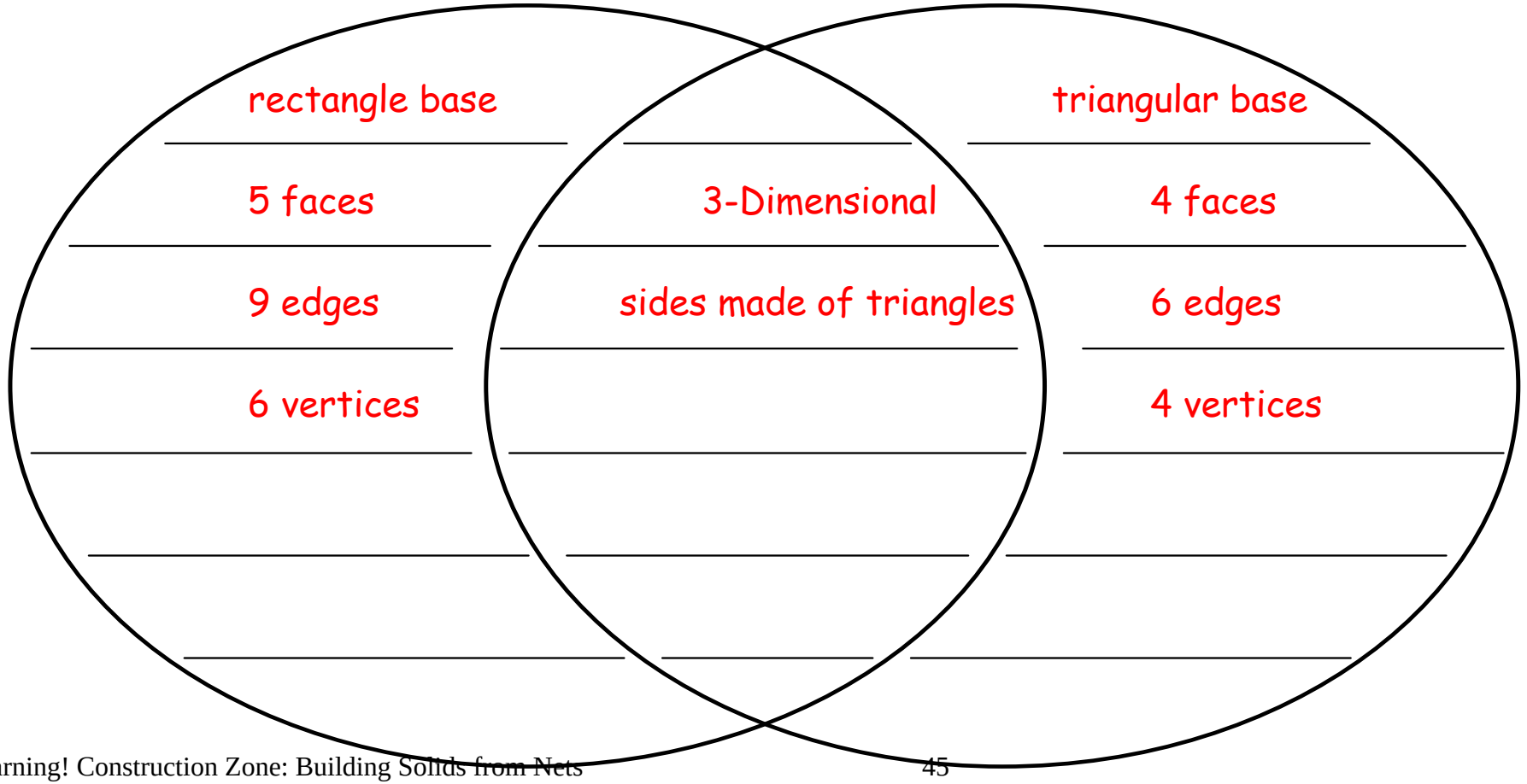
Name_____ Date_____

Summative Assessment

Directions: Compare each of the solid figures in the Venn diagram below. Be sure to use mathematical vocabulary and include all attributes of each figure.

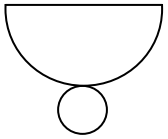
Triangular Prism

Triangular Pyramid

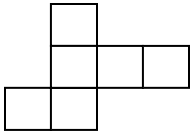


Directions: Use the word bank below to name the solid each net can be folded into. You may use some words more than once and others not at all.

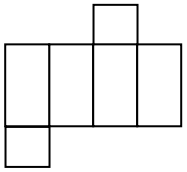
cube	rectangular prism	triangular prism
cone	triangular pyramid	square pyramid
cylinder		



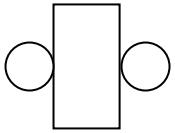
1. cone



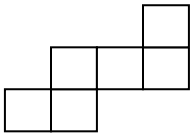
2. cube



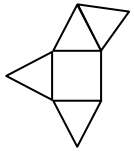
3. rectangular prism



4. cylinder

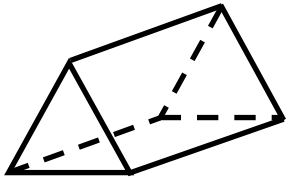


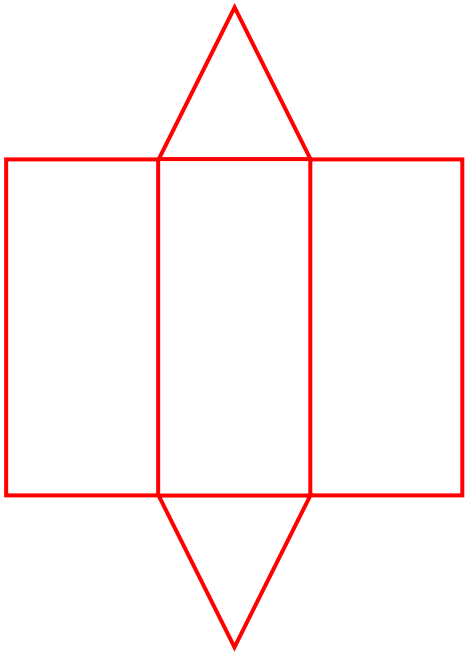
5. cube



6. square pyramid

Directions: Draw a net in the box below that can be folded to construct a triangular prism.





possible solution shown above