Title: Top Secret 3D Space Mission

Brief Overview:

The lesson introduces the concepts of three dimensional shapes, faces, edges, vertices, and nets using a space mission theme. The students explore three dimensional shapes using a variety of hands-on activities moving from concrete to abstract understanding. For each lesson, the skill and objective are embedded into the space mission motivating student participation and engagement.

NCTM Content Standard/National Science Education Standard:

Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

- 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;

Use visualization, spatial reasoning, and geometric modeling to solve problems

- build and draw geometric objects;
- 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;

Grade/Level:

Grade 4

Duration/Length:

Three class sessions, approximately 75 minutes per session

Student Outcomes:

Students will:

- Analyze the properties of geometric figures
- Identify cones, pyramids, prisms, and cylinders
- Describe solid geometric figures by the number of faces, edges, and vertices
- Compare a plane figure to surfaces of solid geometric figures
- Compose and decompose solid geometric figures

Materials and Resources:

***NASA has a variety of educational space-related programs and resources that can be found at http://www.nasa.gov/audience/foreducators/k-4/index.html .**

Day 1

- 3-dimensional solid figure manipulative set (as many as can be acquired)
- Look-Alikes Jr. by Joan Steiner (ISBN # 0316713473)
- Chart paper
- Magazines to be cut (10)
- Glue Sticks (1 per child)
- Markers (8 packs)
- Scissors (1 per child)
- 3-dimensional "real-world" solid figures (i.e.- soup can, gym cone, cereal box, tissue box, etc.)
- Clay
- Student Resource 1
- Teacher Resource 1A-B
- Teacher Resource 2A-D
- Student Resource 2A-B
- Teacher Resource 3A-B
- Student Resource 4A-C
- Student Resource 3
- Teacher Resource 4A-B
- Student Resource 4
- Teacher Resource 5
- Student Resource 6A-B
- Teacher Resource 6A-B

Day 2

- Captain Invincible and the Space Shapes by Stuart Murphy (ISBN-13 #9780064467315)
- 3-dimensional solid figure manipulative set (as many as can be acquired)
- Gumdrops (4 packages)
- Toothpicks (approximately 2 boxes)
- Clay
- Shape cookie/ play dough cutters
- Teacher Resource 2A-D
- Student Resource 7A-B
- Teacher Resource 7
- Student Resource 8

Day 3

- One inch graph paper (Several sheets per group)
- Square Tiles (At least four per student)
- Scissors (1 per child)
- Tape
- Copies of the net templates
- Real world examples of figures
- Teacher Resource 2A-D
- Teacher Resource 8A-B
- Student Resource 10A-F

- Student Resource 11A-B
- Teacher Resource 9A-B

Development/Procedures:

Day 1

- Pre-assessment
  Tell the students that they have been chosen to be Junior Astronauts by NASA. They will be participating in multiple missions over the next few days in order to help NASA learn about a new solar system they have discovered. Tell the students that NASA has asked you to test the students' knowledge of information before they begin their missions.
  - *Teacher Note: Throughout these lessons, mission cards will be used to introduce an activity. Please put all mission cards in a "secret envelope." A suggestion would be to photocopy them on cardstock.

  Give each student a "Top Secret Test" (Student Resource 1). Once every student has a test sheet, tell them that you are going to show them some objects and figures (Teacher Resource 1A-B). They should write down the name of the object next to the corresponding number on their top secret test.

  Collect all student tests and casually flip through them in the front of the room. After a few seconds, tell them that they have all passed the entrance test and are ready to begin their first mission!

- Engagement
  Acquire a copy of Look-Alikes Jr. by Joan Steiner (ISBN # 0316713473). Gather students in the front of the room and take out the appropriate mission card. Explain to the students that their first mission is to identify different shapes in the book (Teacher Resource 2A-D). Read the book, stopping at each page so students can identify what shapes they see.

- Exploration
  Tell students their second mission has just arrived. Secretly, remove the second mission card (Teacher Resource 2A-D)! Tell students that they will need to explore space objects. Their mission is to work with a partner to cut out the space objects (Students Resource 2A) and sort/place them on their T-chart (Student Resource 2B). Give students about 5 minutes to do this. Ask for volunteers to share how they sorted their space objects. In the discussion, guide students towards sorting their objects into 2 categories: 2 dimensional and 3 dimensional shapes. Create a large T-chart, using chart paper (Teacher Resource 3A) on the board. Distribute large individual space shapes to students (Teacher Resource 3B). Have students bring up the large individual shapes and place them on the appropriate side of the T-chart. Begin a discussion on why students placed their shapes in a certain place. Possible guide questions/responses are as follows:
  - Question: What do all of these shapes have in common (referring to the 2-D shapes)?
  - Answers: They're flat, they have x amount of sides, they have corners, they have angles, they are 2 dimensional.

- Question: What do all of these shapes have in common (referring to the 3-D shapes)?
- Answers: They are not flat, they pop out, they have more sides, some have points, they are 3 dimensional.

o Explanation

Tell students that they are now ready for their third mission (Teacher Resource 2A-D)! They will explore the 3 dimensional shapes from the t-chart in order to identify them by name.

Begin to extend the discussion from the exploration, using concrete examples of the three dimensional shapes. If possible, acquire a set of 3-D shapes to use for instructional purposes. If you do not have 3-D shapes, you could search through a block collection (usually in the Kindergarten room) to find the shapes. Pass around the shapes to groups of students and give them some time to explore and feel the different shapes. Begin a discussion about what the different shapes look like. You may want to use some of the following guide questions:

- What attributes does your shape have?
- How is your shape different from your neighbors shape?
- Where have you seen this shape before in the classroom? In your home? On the playground?
- How might you describe your shape to someone who couldn't see it?

Ask students if they know the names of any of the shapes. If they do, begin with that shape. For example, if a student offers the name of a cube, begin with that shape, saying "Yes this is called a cube. Why do you think it is a cube? What attributes does it have that make it a cube? Where can you find cubes in our classroom?"

As you progress through a discussion about each of the shapes, place the 3-dimensional shape along with a name-card and a 2-dimensional picture of the shape (Student Resource 4A-C) in the front of the room for students to see during the discussion. You may choose to create a word wall, chart, or bulletin board. Be sure to create a connection for students between the solid three dimensional figure and its 2-dimensional picture. During the discussion, begin to draw students' attention towards the different shapes that make up the faces of the solids. For example, when discussing the rectangular prism, you might ask the students: "What shapes do you see on the faces (or sides) of this shape? Yes, rectangles make up the shapes of these faces and because of that, we call these shapes rectangular prisms. Why might they be called prisms?"

Continue the discussion about prisms and pyramids, asking the students to think-pair-share with a partner to discuss how prisms and pyramids are different, using the manipulative 3-D shapes. Distribute the note sheet on the difference between prisms and pyramids (Student Resource 3). This sheet should be used as a resource for students.

Progress through each 3-D shape until all shapes have been discussed and their labels have been placed next to them in the front of the room (Teacher Resource 4A-B). Be sure to note the different shapes that make up the faces of the figures.

o Application

Place students in 8 groups of 2-3 students per group. Each group should receive a large piece of chart paper separated into 4 sections (See Teacher Resource 5 for an example). Give each group a different 3-D shape printed on a card (Student Resource 4). Give each group a few age appropriate magazines, scissors, and glue. Tell students that they need to paste their 3-D figure picture in the upper left hand corner of their chart. Then, their job is to figure out the name of the shape and write that name in the center oval of the circle. Last, they should look through the magazines and find multiple examples of their shape in the real-world. They will cut and paste these pictures onto their chart. If students are unable to find real-world examples in the magazine, they may choose to draw or list instead. Let students know that they will display the posters in the room and continue to add more to them as they work through the unit. When all students have finished, do a gallery walk with the students' posters.

- Differentiation
  - Reteach-
    For those students struggling with the skills, you may choose to re-teach the skills by using concrete examples of three dimensional figures that can be found in the environment. For example, you might use a tissue box to represent a rectangular prism or a cone from gym class to represent a cone. Using these manipulatives, this group could work together to discuss, feel, and identify the different characteristics of shapes. You might choose to use some of the following discussion questions:
    - What types of faces do these figures have?
    - What does the top of the figure look like?
    - What object in the real-world could you identify this shape with?

  - Enrich-
    Those students who have a concrete understanding of the names and certain faces of the shape will participate in a center activity focused around creating shapes using clay. Place different containers of clay on a table. Tell students to mold a new planet using clay. Their planet must be a combination of 3-D figures. After they have created this 3-D shape, they will make a sketch of their planet, name the planet, and write about what 3-D shapes they used to create their planet (Student Resource 5).

- Assessment
  Students will complete an exit ticket in which they will be able to match a 3-D solid figure with its name (Student Resource 6A-B). An answer key is provided on (Teacher Resource 6A-B).

Day 2

- Engagement

  Acquire a copy of the book entitled, Captain Invincible and the Space Shapes by Stuart Murphy (ISBN-13 #9780064467315). Tell students that their next mission is to follow along while you read the book and see if they can figure out the special characteristics of the 3-D space shapes (Teacher Resource 2A-D). Read the book to the class, stopping at appropriate breaks to discuss certain characteristics of the shapes.

- Exploration

  At the front of the room, you should sort all solid three dimensional figures into two groups: prisms and pyramids. Ask the students to talk with a partner and identify how you sorted the figures. Ask them to explain their thinking.

  In small groups, give students solid three dimensional shapes. Tell students to find other ways to sort the three dimensional figures. When they finish they should be ready to explain the sorting factors.

  Discuss with students their approach to sorting and how they looked at the different parts/characteristics of the shapes to help them sort.

- Explanation

  Tell students that now that they have completed their missions of naming the mysterious 3-D space shapes, we are going to find ways in which they are alike and different looking at their vertices, edges, and faces (Teacher Resource 2A-D). Using the set of 3-D manipulatives, choose a shape that students are comfortable with such as the cube. Begin a discussion on what we call the different characteristics of the shapes, using certain guide questions below:

  - Say: Yesterday we talked about how different parts of the shapes helped to identify them. What did we call these again (pointing to the face of the cube)?
  - Say: We know that our shapes have different faces, but something connects these faces together. Does anyone know what we call these (run your finger along the edge of the cube)? We call these edges, like the edge of a table. An edge is a place where two faces meet.
  - Say: Now we have different faces and we have edges to connect our faces. Right here where the edges come together, our shapes have these points (point to the vertex). What do we call these points? We call them vertices; vertices are the points where two edges meet.

  Tell students that to help us find the faces, vertices, and edges of our shapes we're going to create 3-D shapes using gumdrops and toothpicks. Give each student a handful of gumdrops and a handful of toothpicks. Allow them a few minutes of exploration, working with a partner to see if they can create one of the 3-D shapes. Place the manipulative 3-D shapes at the front of the room as a reminder.

  Ask students if anyone was able to create a shape. Ask for volunteers to share. Begin a discussion using the following guidelines:

  - What shape did you make?
  - What do the gumdrops represent?
  - What do the toothpicks represent?
  - How many gumdrops did you use?

- How many toothpicks did you use?
- Where are the faces? What are the faces?

After discussion, allow a few minutes for students to share about the different shapes they have created, emphasizing the number of edges, vertices, and faces they found on their shape.

Once students have shared, play a quick game where you give students certain criteria and see if they can build that shape. You may choose to use some of the following prompts:

- Build a cube.
- Build a shape with 8 vertices.
- Build a shape with 4 triangular faces.
- Build a shape with a rectangular base and 3 triangular faces.
- Build a shape with 4 vertices.
- Are there any shapes you can't make? Why?

o Application

After the class discussion, tell students that they are going to revisit their gallery walk posters to add more information to them. Tell students that NASA now wants to know more about these 3-D planet shapes. On the top right hand corner of the poster, students should write the characteristics of their planet shape (how many vertices, edges, and faces does it have, what are the faces, etc.). On the lower right hand corner of the poster they should write some non-examples of their shape. After all students have completed, they will take a gallery walk and share.

o Differentiation

- Reteach-

  Using clay and shape cookie cutters, students will create the different 3-D shapes using the manipulative models. During this creation period, you should reinforce the ideas of vertices, faces, and edges. It is important that these students find a way to identify where the edge of the figure is (ex: like the edge of a table), a vertex (or point of the figure), and the faces (what shapes were used to make the sides of the figure).

- Enrich-

  For those students who have a solid concrete understanding of the concept, they may choose to play "What Space Object Am I?" (Student Resource 7A-B). In this game, students will have a three dimensional shape placed on their back. A partner will look at their shape and give them clues to help them guess their shape. For example, if the student has a rectangular prism on their back, their partner might say, "This shape has 8 vertices," etc.

o Assessment

After the re-teaching and extension sessions, students will have an opportunity to apply their knowledge of the skills. They will complete a written assessment where they must identify the name of a 3 dimensional shape and the number of faces, vertices, and edges it has (Student Resource 8). A key is provided on (Teacher Resource 7).

- Engagement
  Tell the students that in order for them to complete their next mission they have to complete a challenge first. Distribute four square tiles to each student. Ask the students to come up with an arrangement for their four tiles that follows the criteria that you will give them. Tell the students that each tile must be touching another tile on at least one side. Give the students a minute or two to come up with an arrangement. Ask for a student to volunteer to share their arrangement on the overhead. Make sure students are putting the tiles together correctly. Ask other students to share who have different arrangements.

- Exploration
  Tell the students that their mission today is to design a satellite that can transform into a three dimensional figure. Their job is to arrange squares in as many different arrangements as they can (Teacher Resource 2A-D). For the mission they will be using five tiles instead of four. The only rule is that when they arrange the tiles each tile has to completely touch the side of another.

  Tell the students that once they have arranged the five tiles they need to draw it on the graph paper (Student Resource 9) and cut it out. Distribute five tiles and several sheets of graph paper to pairs or groups of three students. Give the students about ten or fifteen minutes to work.

  When groups have completed their arrangements ask the students to explain how they designed their different arrangements. Have them share their thinking. Ask the students how many different arrangements they were able to make. Have students share their different arrangements. Tell the students that there were up to twelve possible solutions for this task.

  Ask the students to take their cut out pieces and try to fold them into three dimensional figures. Tell them that their satellites might be missing one side. *There should be seven arrangements that work.

- Explanation
  Ask the students what three dimensional figures they were able to create for their satellites.

  Tell students that they have just created a net. Tell the students that a net is a flat shape that can be folded into a three dimensional shape. Show the students the two pictures of the nets (Teacher Resource 8A-B). Ask the students if they can figure out what shape will be created if they folded the net into a three dimensional shape. As students volunteer an answer have them come up and explain their thinking. Give the students the complete cube net and have them try to construct that figure (Student Resource 10a). Lead students into a discussion involving how they used what they know about faces, edges, and vertices to construct the cube.

- Application
  Divide the class into groups of four. Distribute the four net patterns, scissors, and tape to each group (Student Resource 10B-E). Take out the next mission card. Tell students that their next mission is to work with their group members to look at each net and predict what three dimensional figure that net will make (Teacher Resource 2D). Each member should construct one figure.

  When all groups have finished putting together their nets have them talk to their group members about their predictions. Ask the students who predicted the correct figure and who predicted the wrong figure. Ask students to raise their hand if they correctly predicted their figure. Ask how those students knew that their net would be that specific figure. Ask the students who did not predict correctly if they know why they made the wrong prediction.

- Differentiation
  - Reteach-
    Have students take apart real world examples of three dimensional figures so that they can look at the net of the shape. (example: Have students disassemble a tissue box into a net) Students can disassemble and reassemble the real life nets.

  - Enrich-
    Have the students put together a net of a larger figure with many faces (Student Resource 10F). Have students try and name that solid figure.

Summative Assessment:

The summative assessment will assess the students' understanding of three dimensional solid figures (Student Resource 11A-B). A variety of multiple choice questions were created based on the hierarchy of questioning. Students must identify vertices, faces, edges, and names of three dimensional figures. They must also use higher-level thinking skills to determine what figures a net would create when folded and explain their thinking process. The summative assessment should allow you to see a clear picture of the extent of your students' understanding of the concepts taught in this unit. A key is provided (Teacher Resource 9A-B). After all students have completed the summative assessment, take out the last mission card and congratulate them on a completed mission (Teacher Resource 2D).

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NAME: _____

TOP SECRET TEST

1_____

2_____

3_____

4_____

5_____

NAME: _____

TOP SECRET TEST

1_____

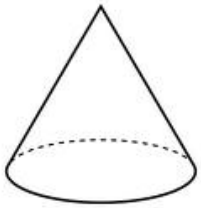
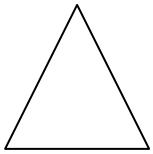
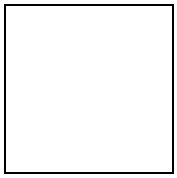
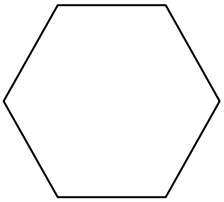
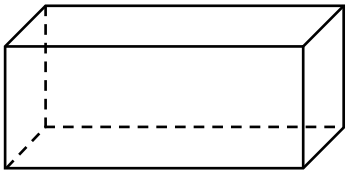
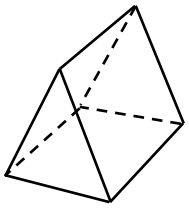
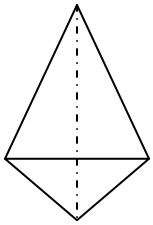
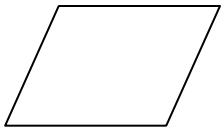
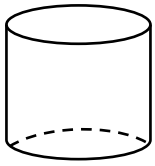
2_____

3_____

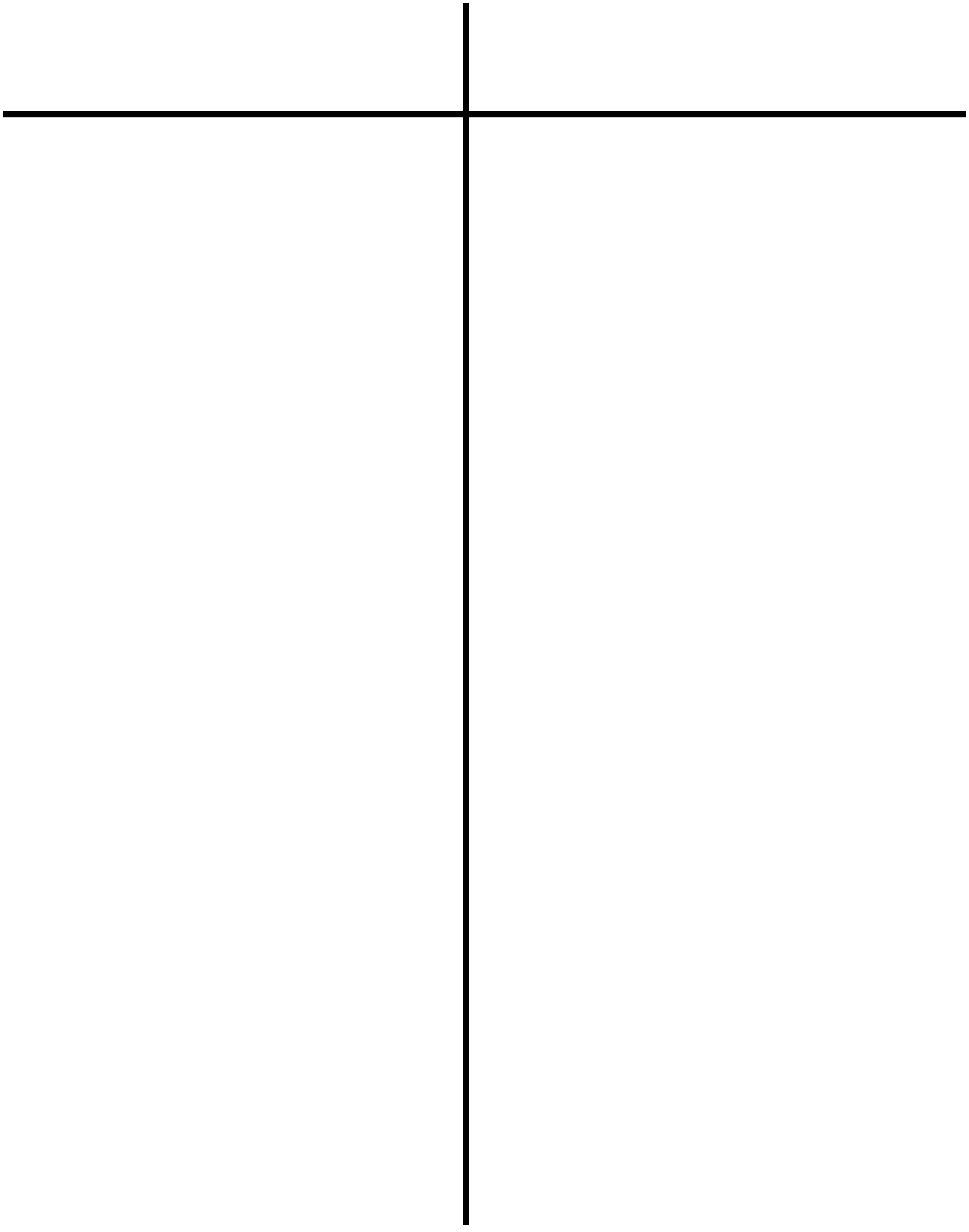
4_____

5_____

SPACE OBJECTS

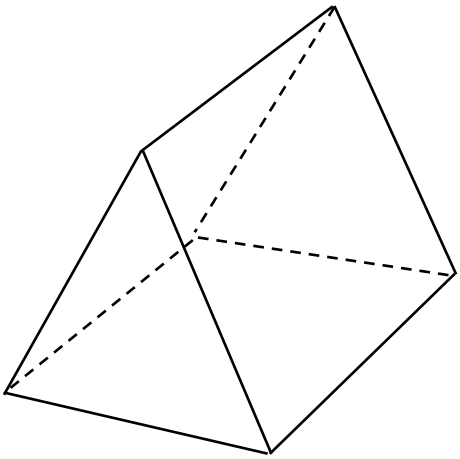
		
		
		

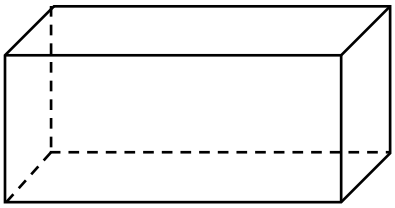
SPACE OBJECT SORT



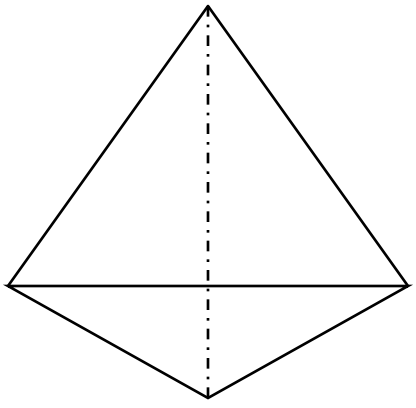
PRISMS AND PYRAMIDS

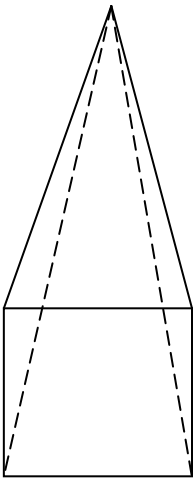
Prisms.... have 2 parallel faces called bases.

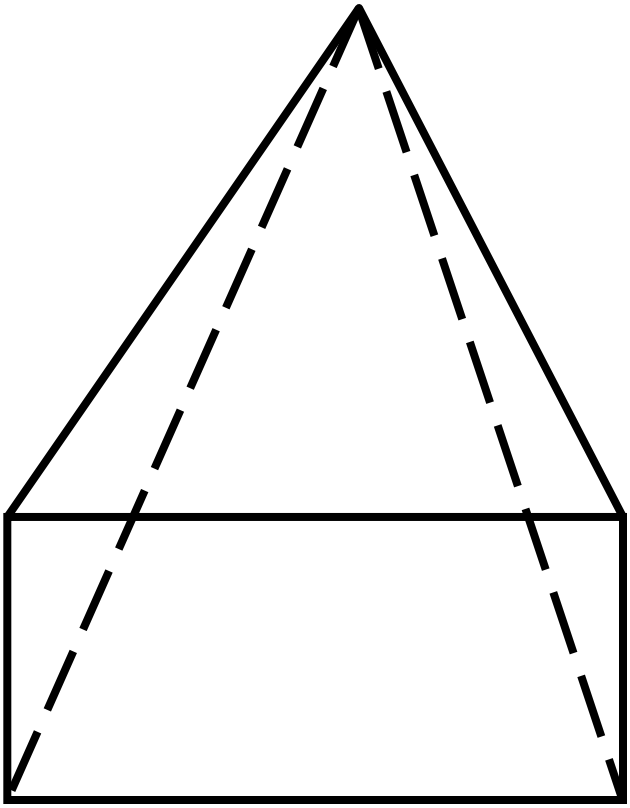


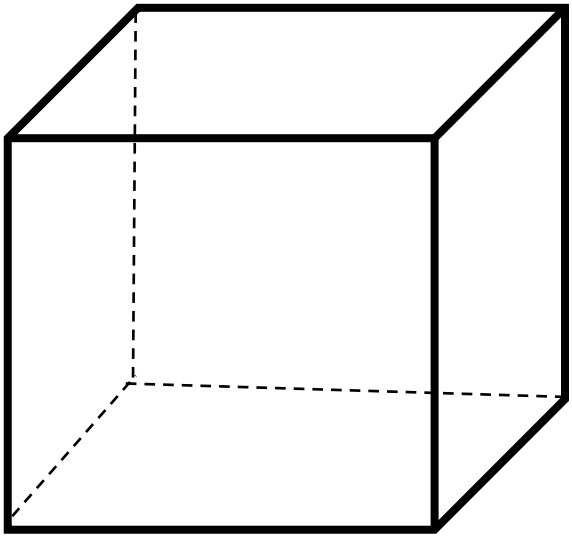


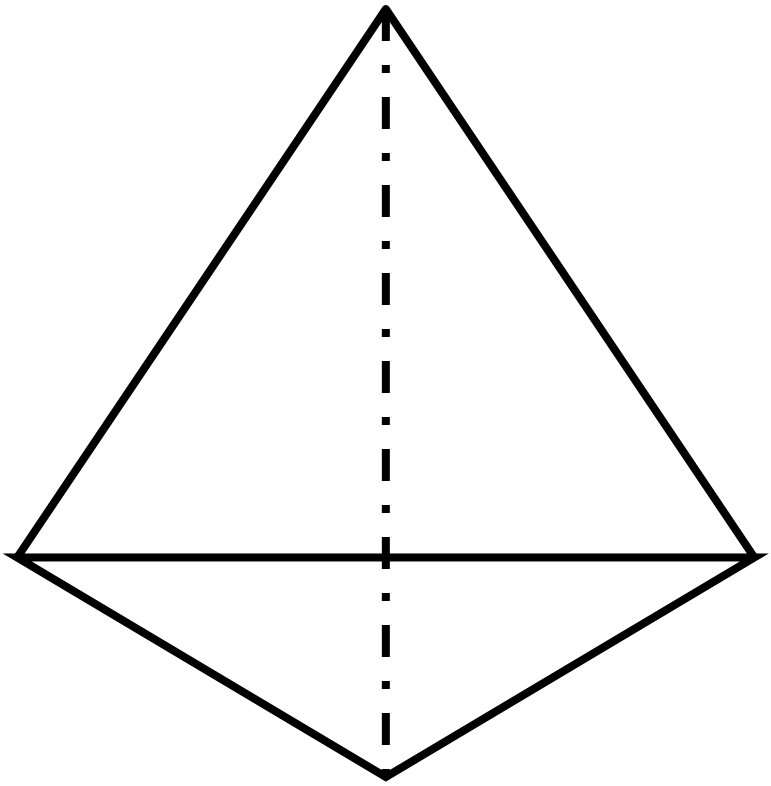
Pyramids...have 1 base (any shape) and triangular faces that come together at one vertex at the top!

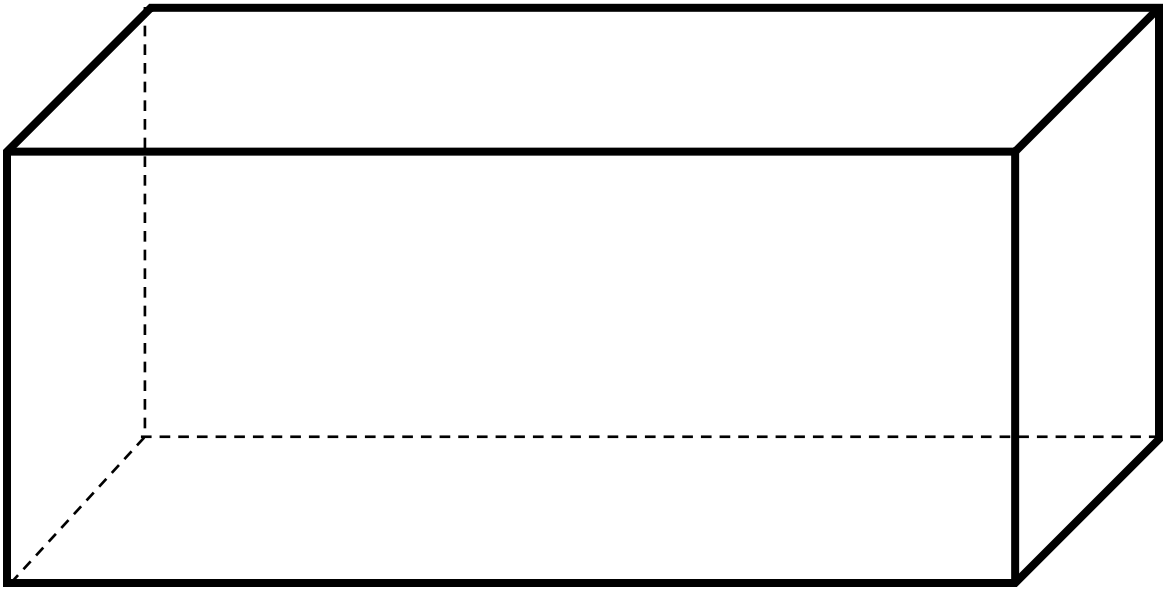


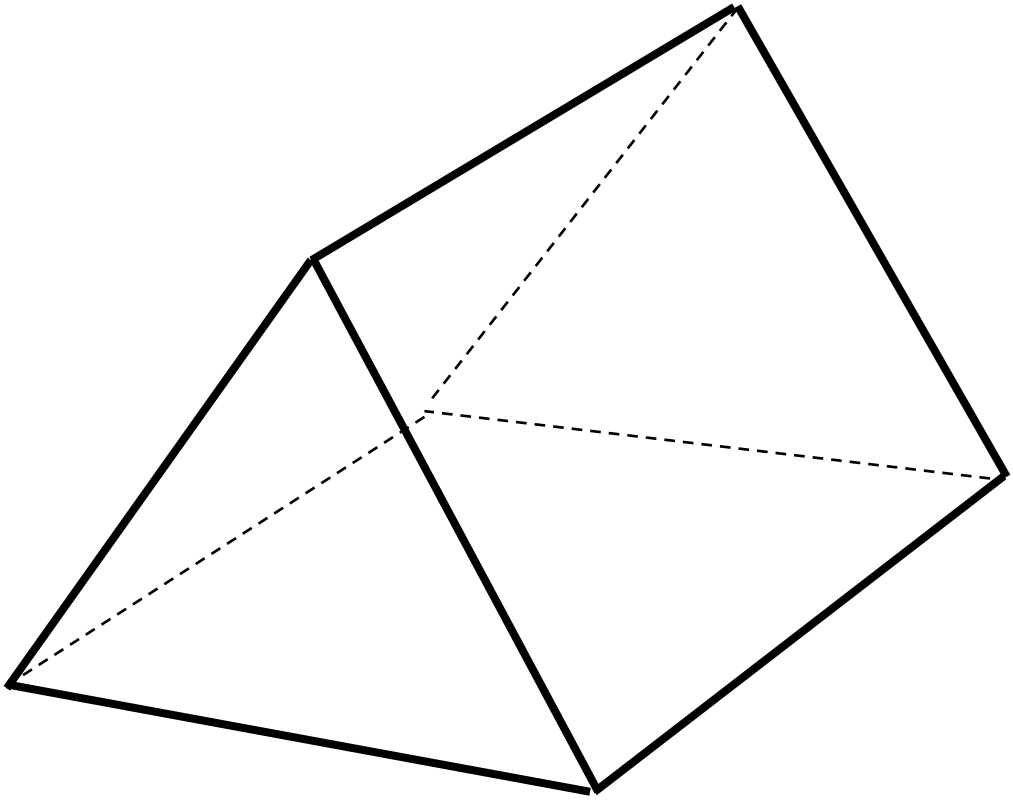


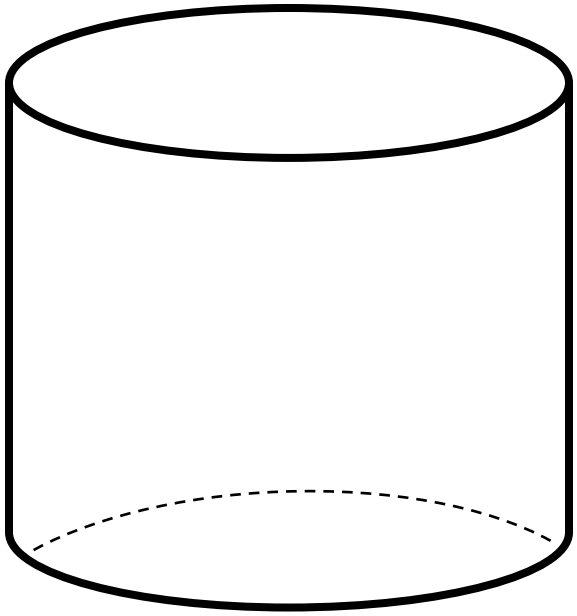












INTRODUCING THE PLANET OF…

Directions: Using clay, create a new planet! You can use any combination of 3-dimensional shapes that we discussed to create your planet. After you create your planet in clay, sketch it below and label the 3-dimensional shapes you used. Write about what your planet would be like. Don't forget to name it!

Sketch it here Planet Name:_____

Tell me about it...

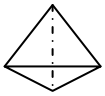
OFFICIAL DOCUMENT

Name:_____
Date:_____

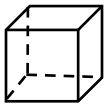
Directions: Match the 3-dimensional solid figure to its name.

1. Cylinder

2. Cone

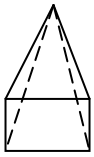


3. Rectangular prism

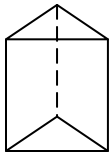


4. Rectangular pyramid

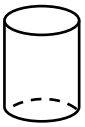
5. Cube



6. Triangular prism



7. Triangular pyramid



NASA just returned from a space mission. They took a photo from the satellite and they noticed some rectangular and circular shapes. What might these shapes be? Explain your answer using what you know about 3 dimensional shapes.

_____

_____

_____

_____

_____

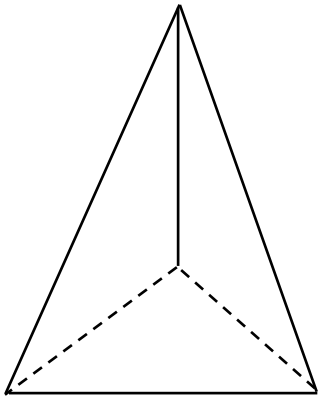
_____

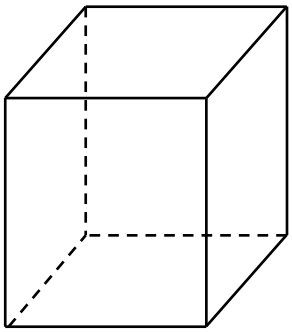
_____

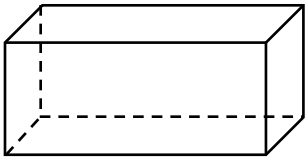
_____

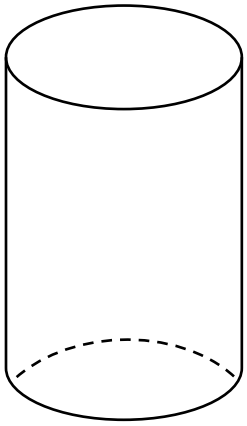
_____

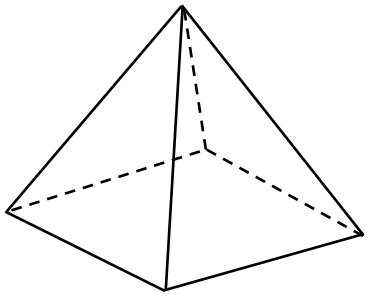
WHAT SPACE SHAPE AM I?

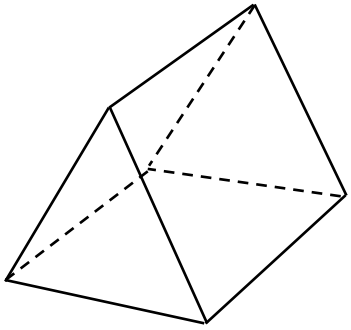


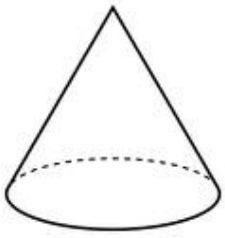












WHAT SPACE SHAPE AM I?

RULES TO FOLLOW…

1. Your teacher will tape a mystery space shape on your back. NO PEEKING☺
2. Your teacher will assign you a partner.
3. Your partner will give you clues to help you figure out what space shape you have!
4. Your partner can give you an unlimited amount of clues.
5. Once you guess your correct space shape, switch roles!

CLUES TO GIVE…

*Your shape has ____ vertices

*Your shape has _____faces

*Your shape has _____edges

*Your shape has _____as a face

*Your shape might look like a _____ in real-life

HAVE FUN AND GOOD LUCK!

OFFICIAL DOCUMENT

Name:_____
Date:_____

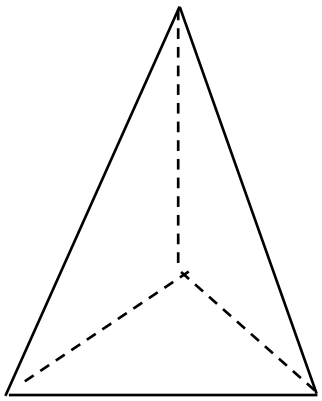
Directions: Identify the 3-D geometric shape below. Identify the number of vertices, edges, and faces the figure has.

This shape is a _____.

It has _____ vertices.

It has _____edges.

It has_____faces.



OFFICIAL DOCUMENT

Name:_____
Date:_____

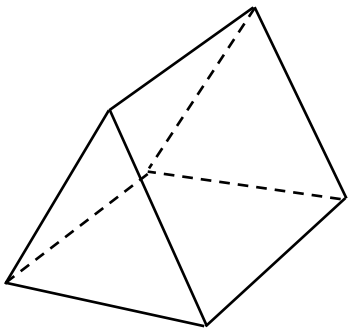
Directions: Identify the 3-D geometric shape below. Identify the number of vertices, edges, and faces the figure has.

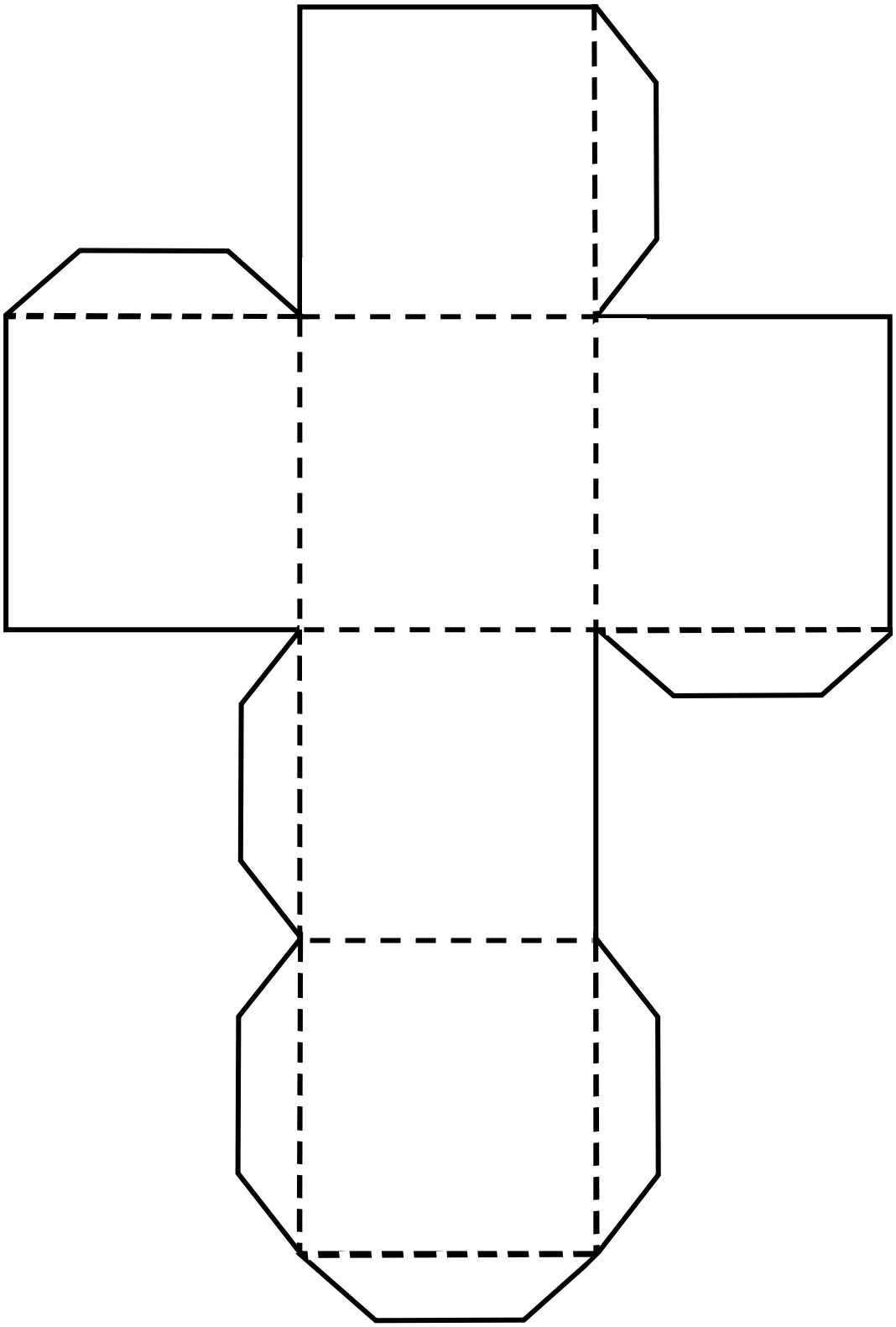
This shape is a _____.

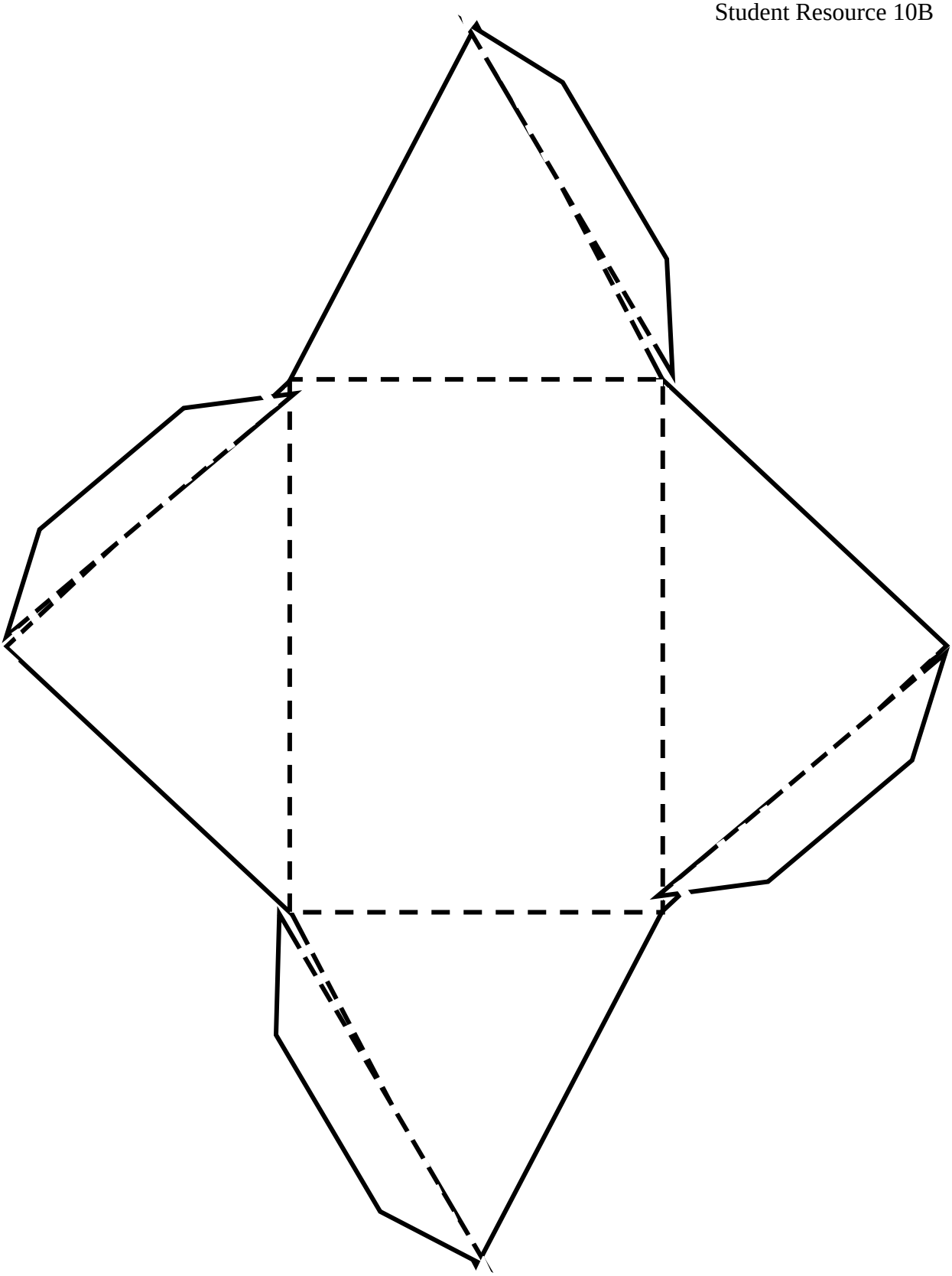
It has _____ vertices.

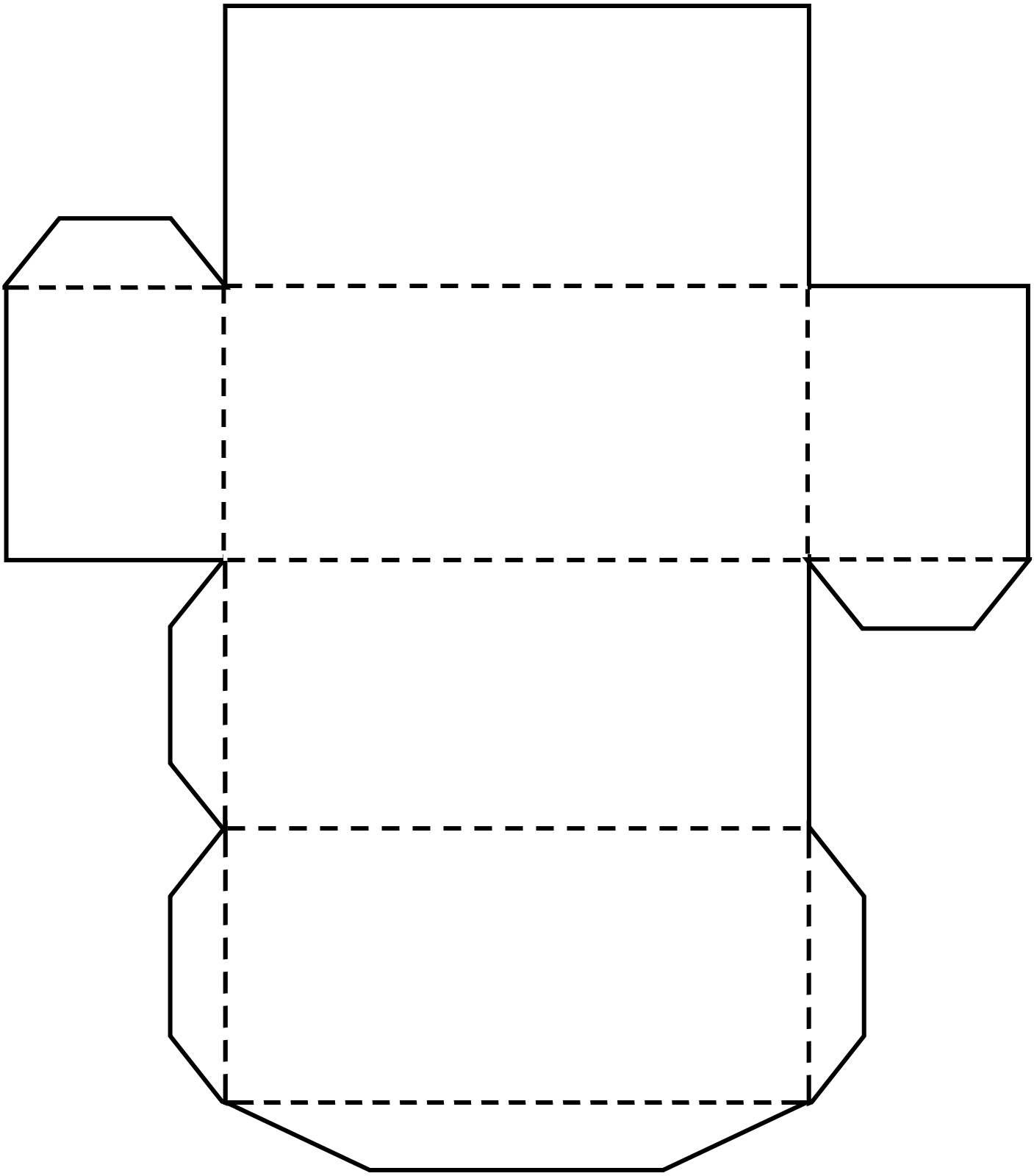
It has _____edges.

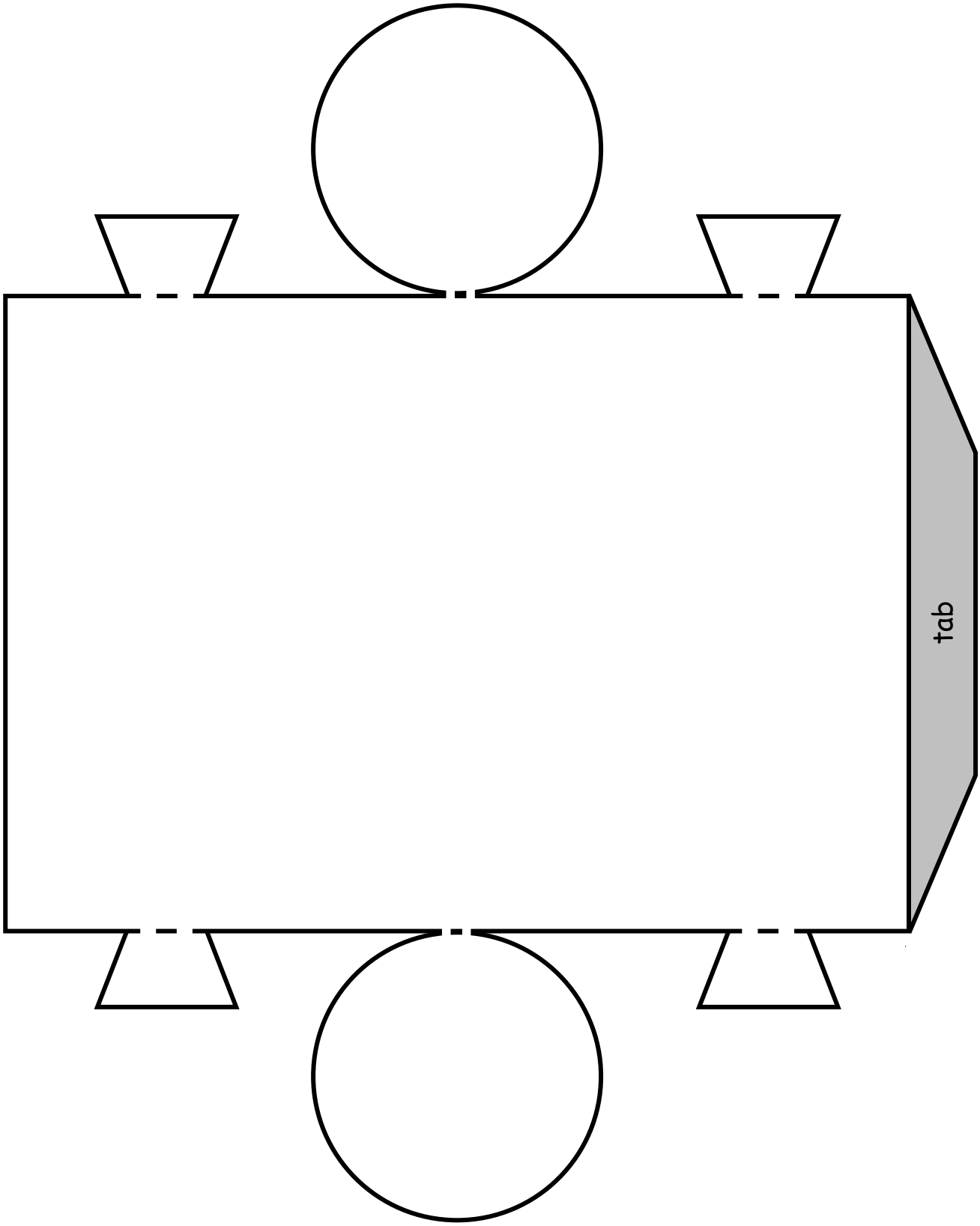
It has_____faces.

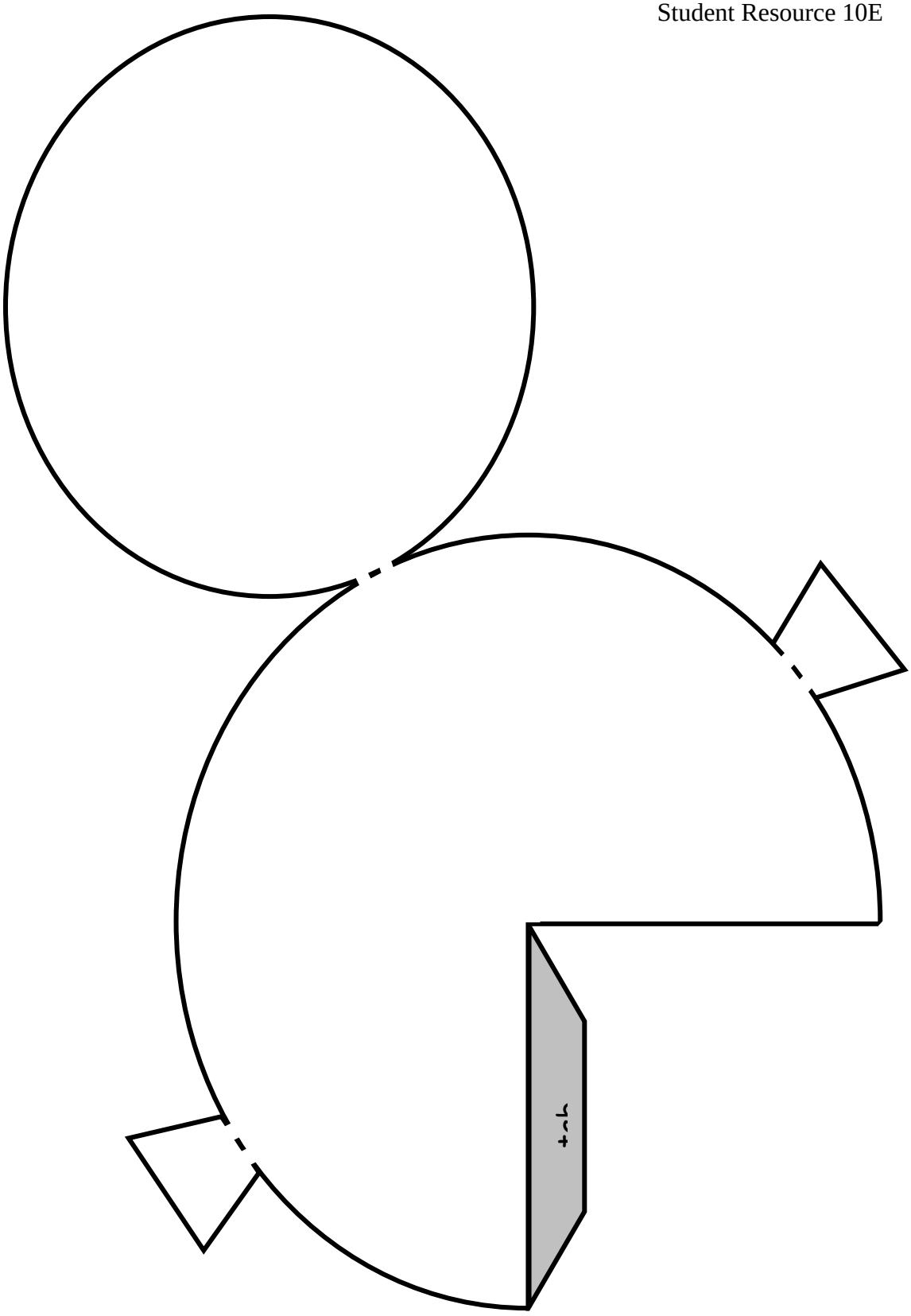


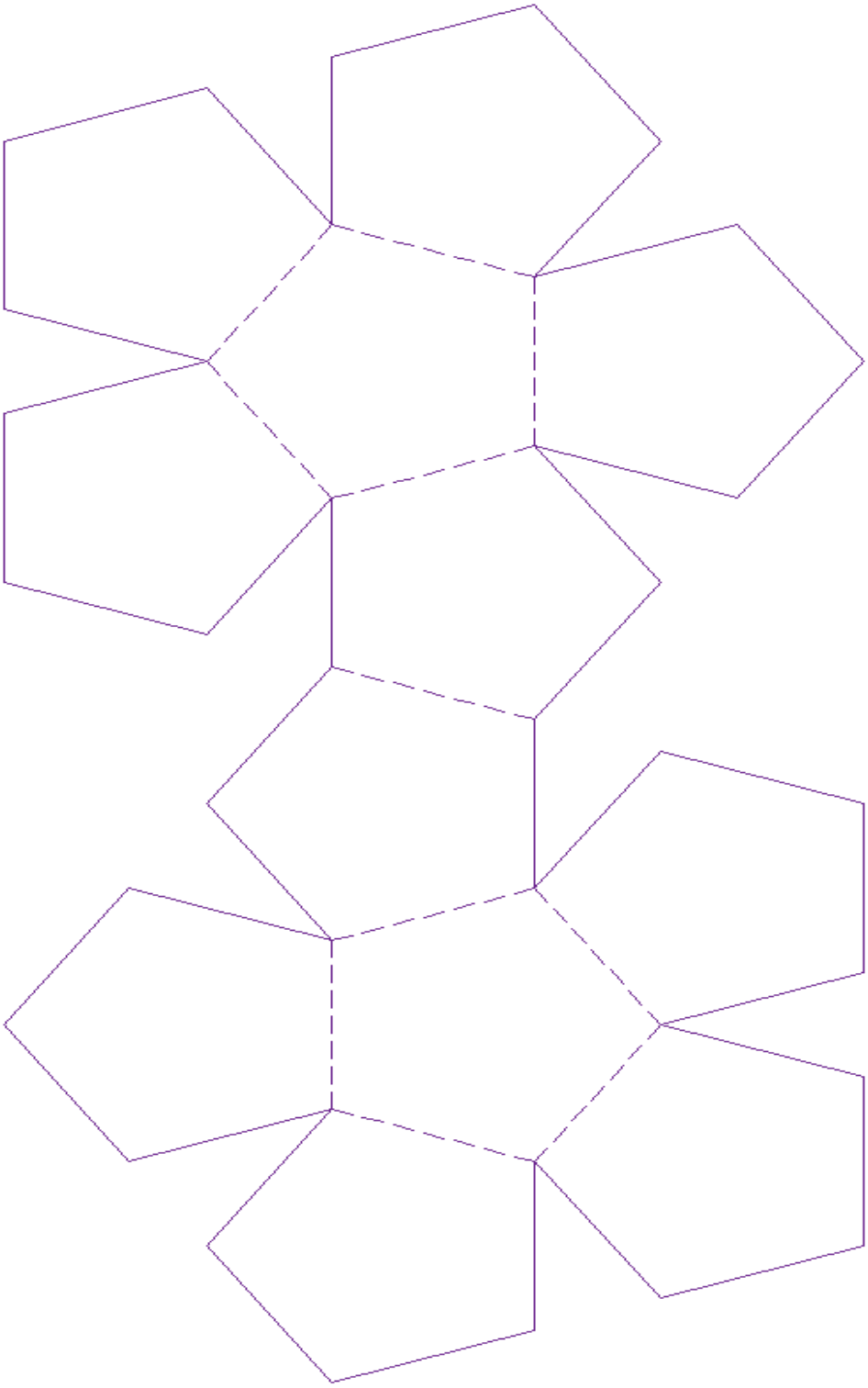






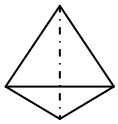

tab


tab

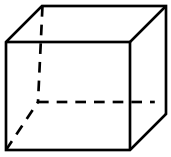


FINAL MISSION

Directions: Read each question and circle the correct answer.

1. This figure is a _____. 

   a. cone
   c. rectangular pyramid
   b. triangular pyramid
   d. triangular prism

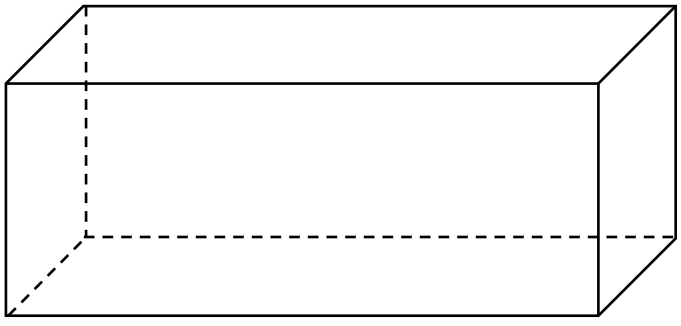
2. This figure is a _____. 

   a. cone
   c. rectangular pyramid
   b. triangular pyramid
   d. cube

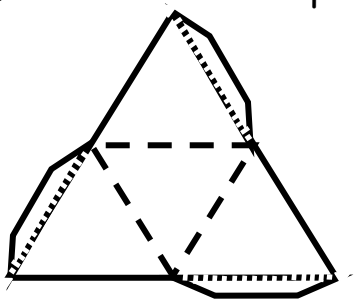
3. A triangular prism has 2 bases that are triangles and 3 faces that are _____.

   a. triangles
   c. rectangles
   b. squares
   d. prisms

4. Circle the vertices on the figure below.



Brief Constructed Response



Part A

What 3 dimensional figure does the net above make?

_____

Part B

Use what you know about 3 dimensional figures to explain why your answer is correct. Use number and/or words in your explanation.

_____

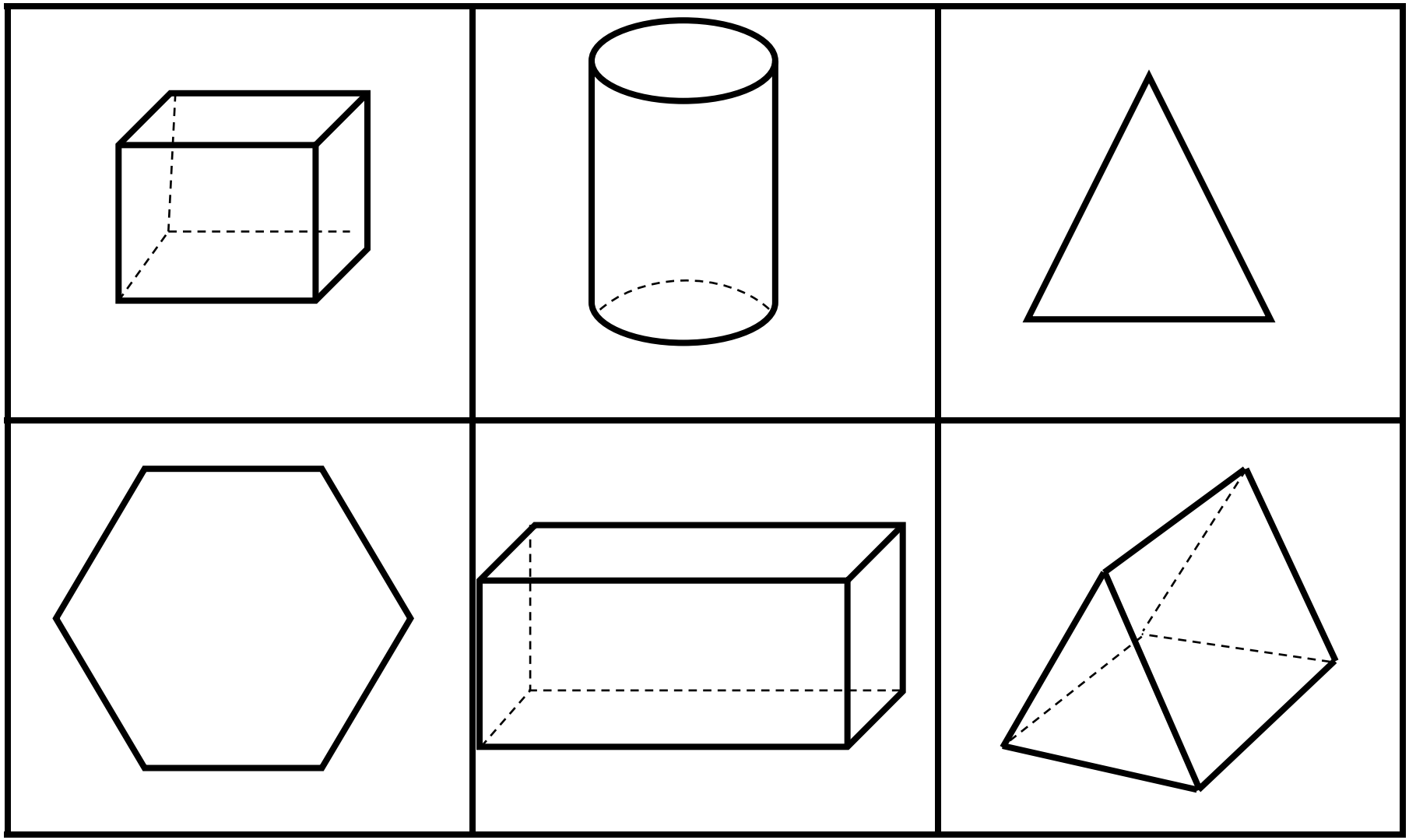
_____

_____

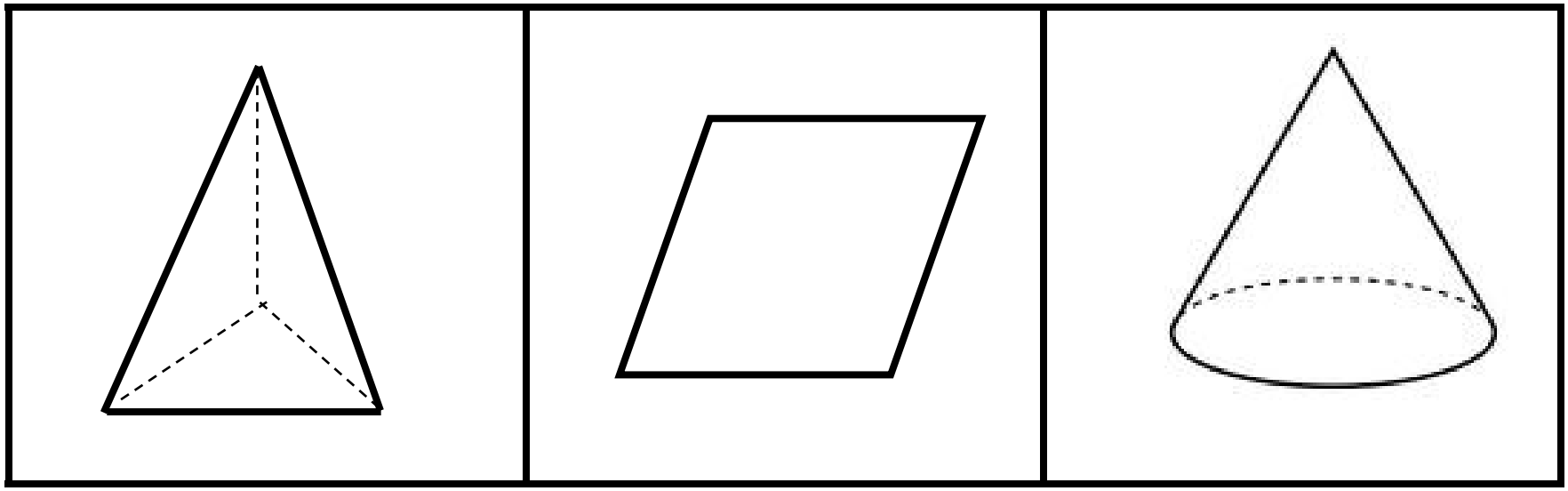
_____

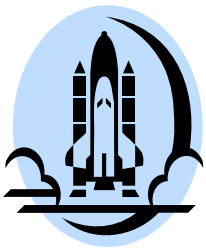
_____

_____



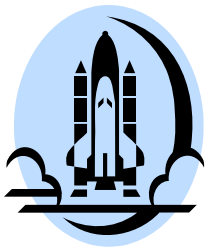
Teacher Resource 1B





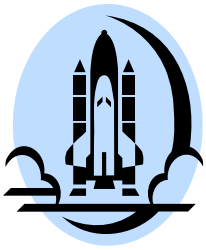
MISSION 1

IDENTIFY DIFFERENT SHAPES.



MISSION 2

WORK WITH A PARTNER TO SORT A VARIETY OF SPACE OBJECTS. PLACE THE OBJECTS ON YOUR T-CHART.

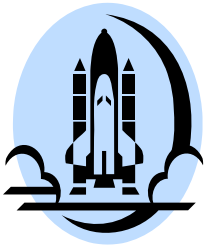


MISSION 3

EXPLORE 3-D SHAPES AND IDENTIFY THEIR NAMES.

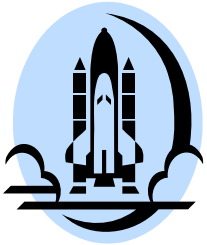
MISSION 4

LISTEN TO THE CAPTAIN AND SEARCH FOR CHARACTERISTICS OF SPACE SHAPES.



MISSION 5

EXPLORE 3-D SHAPES AND EXPLORE THEIR CHARACTERISTICS.



MISSION 6

ARRANGE FIVE TILES INTO DIFFERENT ARRANGEMENTS TO CREATE SATELLITES.

MISSION 7

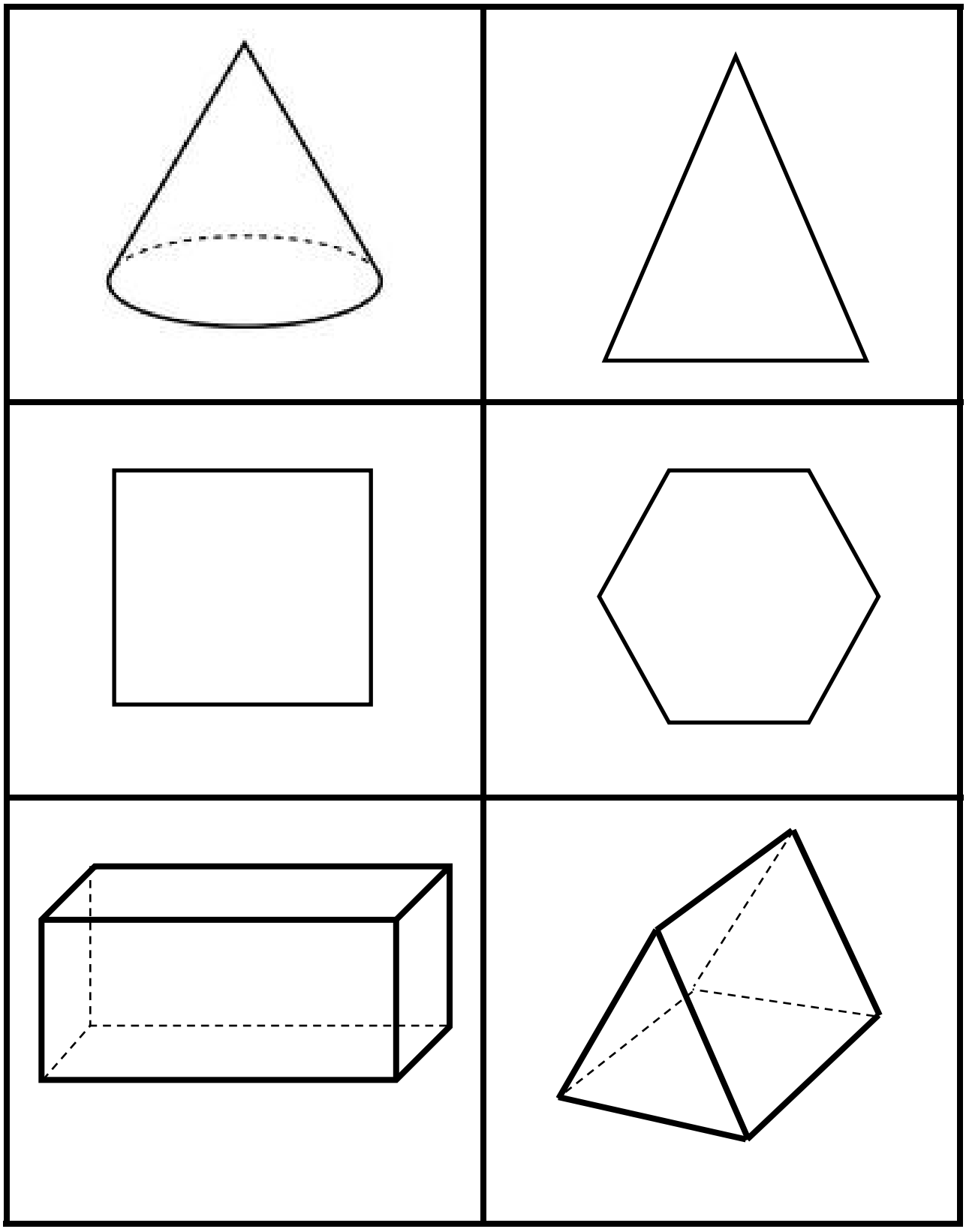
PREDICT AND CONSTRUCT THREE DIMENSIONAL FIGURES FROM NETS.

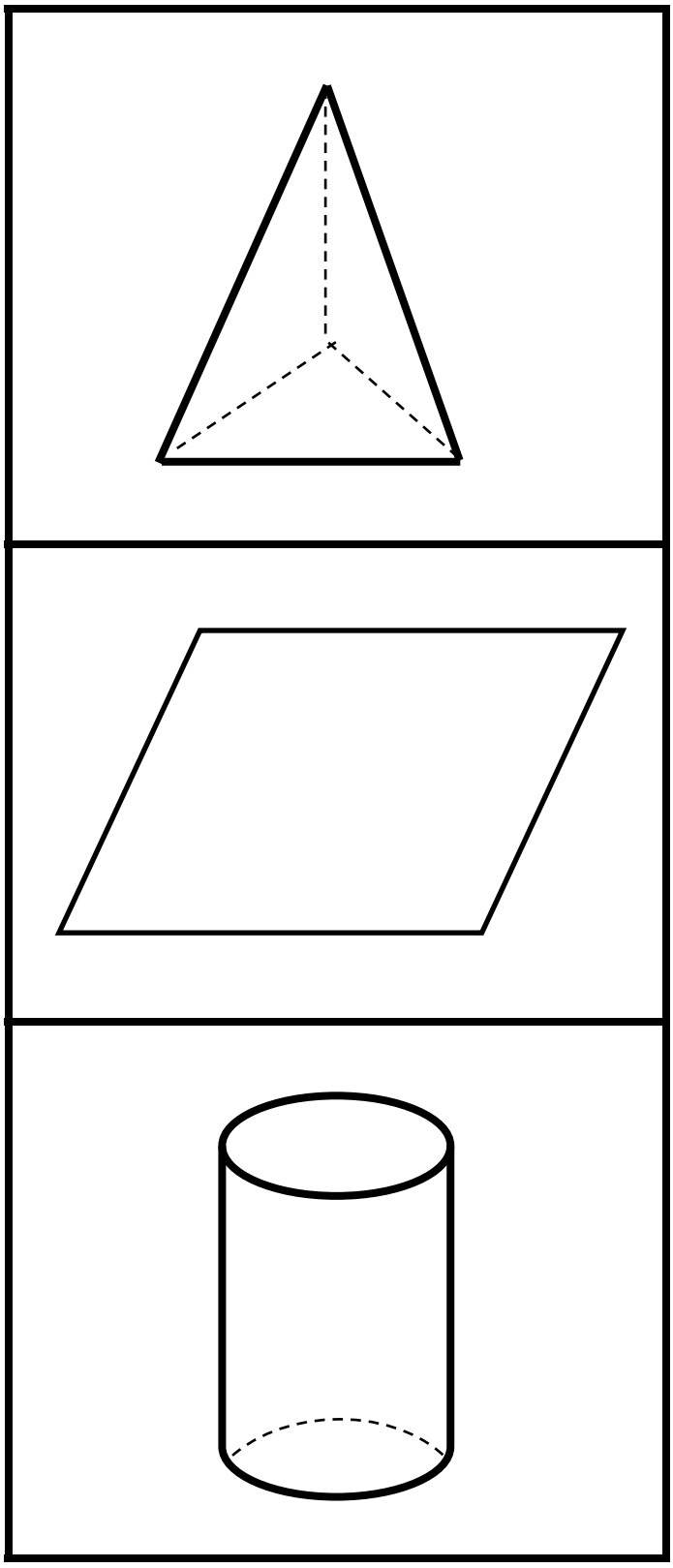
MISSION

COMPLETED!

SPACE OBJECT SORT

2 DIMENSIONAL SHAPES	3 DIMENSIONAL SHAPES





CONE

CYLINDER

CUBE

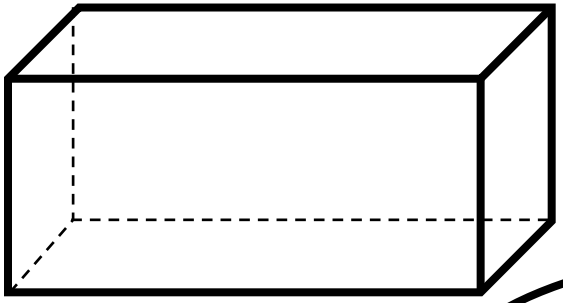
TRIANGULAR PRISM

TRIANGULAR PYRAMID

RECTANGULAR PRISM

RECTANGULAR PYRAMID

Picture

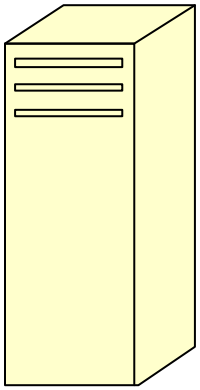


Facts/ Characteristics

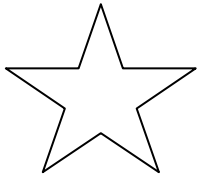
12 Edges
6 Faces
Made of 2 squares and 4 rectangles

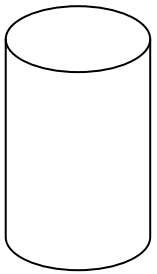
Rectangular Prism

Real World Examples



Non-Examples



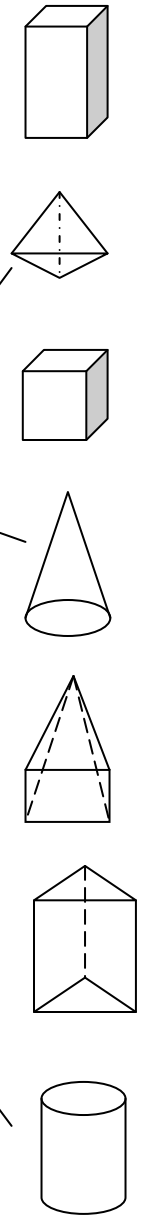


OFFICIAL DOCUMENT

Name:_____
Date:_____

Directions: Match the 3-dimensional solid figure to its name.

8. Cylinder
9. Cone
10. Rectangular prism
11. Rectangular pyramid
12. Cube
13. Triangular prism
14. Triangular pyramid



NASA just returned from a space mission. They took a photo from the satellite and they noticed some rectangular and circular shapes. What might these shapes be? Explain your answer using what you know about 3 dimensional shapes.

_____(ANSWERS WILL VARY) _____

_____

_____

_____

_____

_____

_____

_____

_____

OFFICIAL DOCUMENT

Name:_____
Date:_____

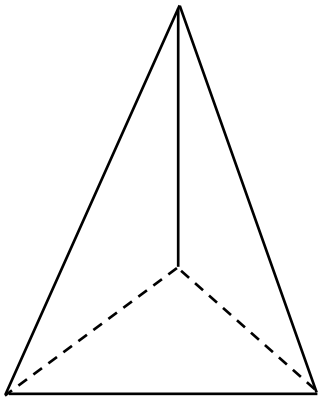
Directions: Identify the 3-D geometric shape below. Identify the number of vertices, edges, and faces the figure has.

This shape is a ____**triangular pyramid**___.

It has ___**4**_____ vertices.

It has ____**6**_____edges.

It has_____**4**____faces.



OFFICIAL DOCUMENT

Name:_____
Date:_____

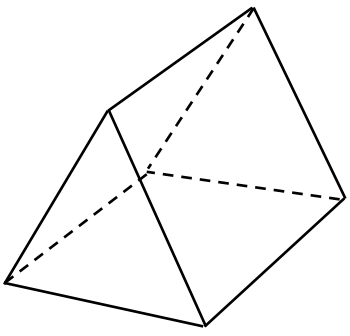
Directions: Identify the 3-D geometric shape below. Identify the number of vertices, edges, and faces the figure has.

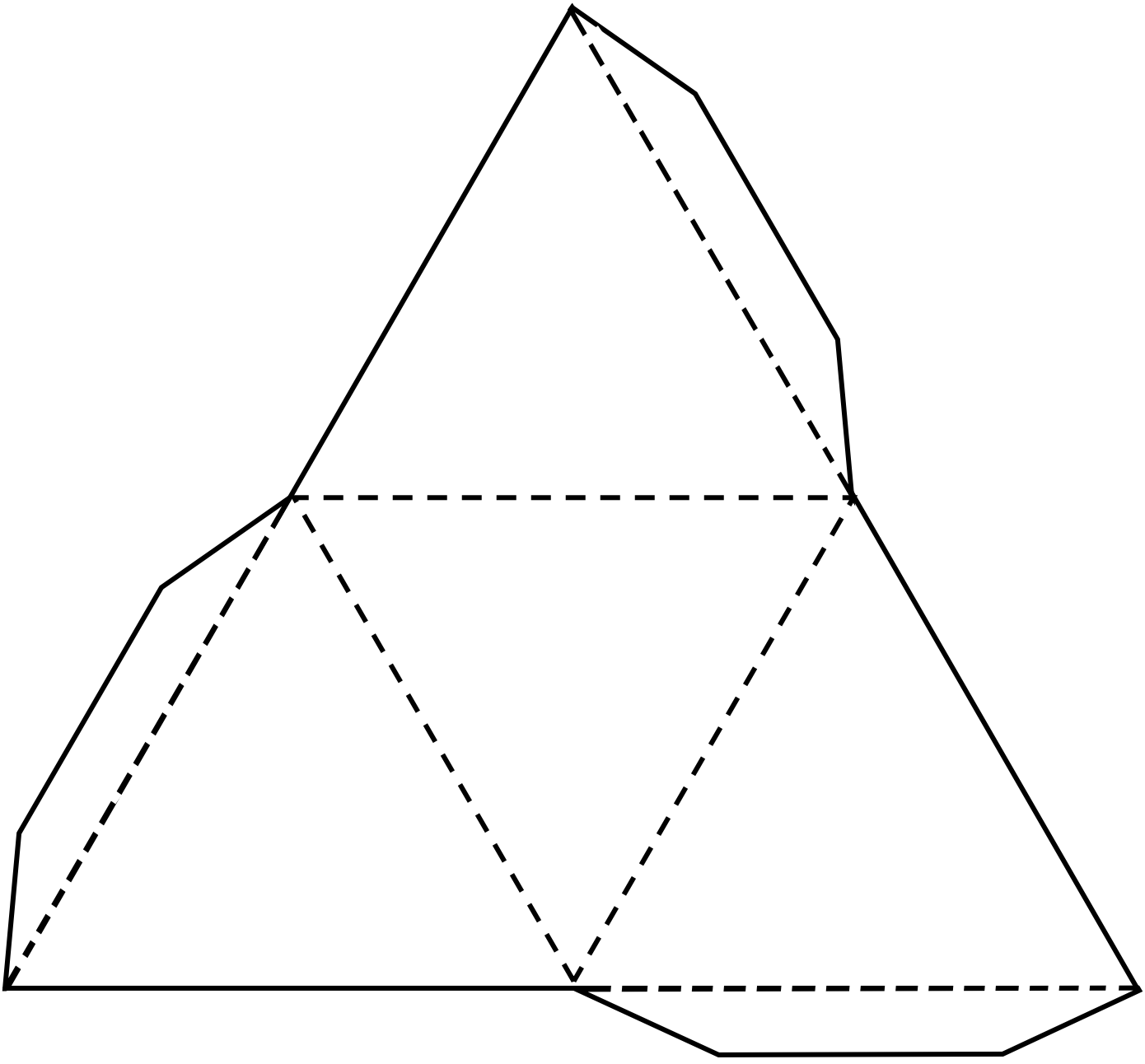
This shape is a _____**rectangular prism**____.

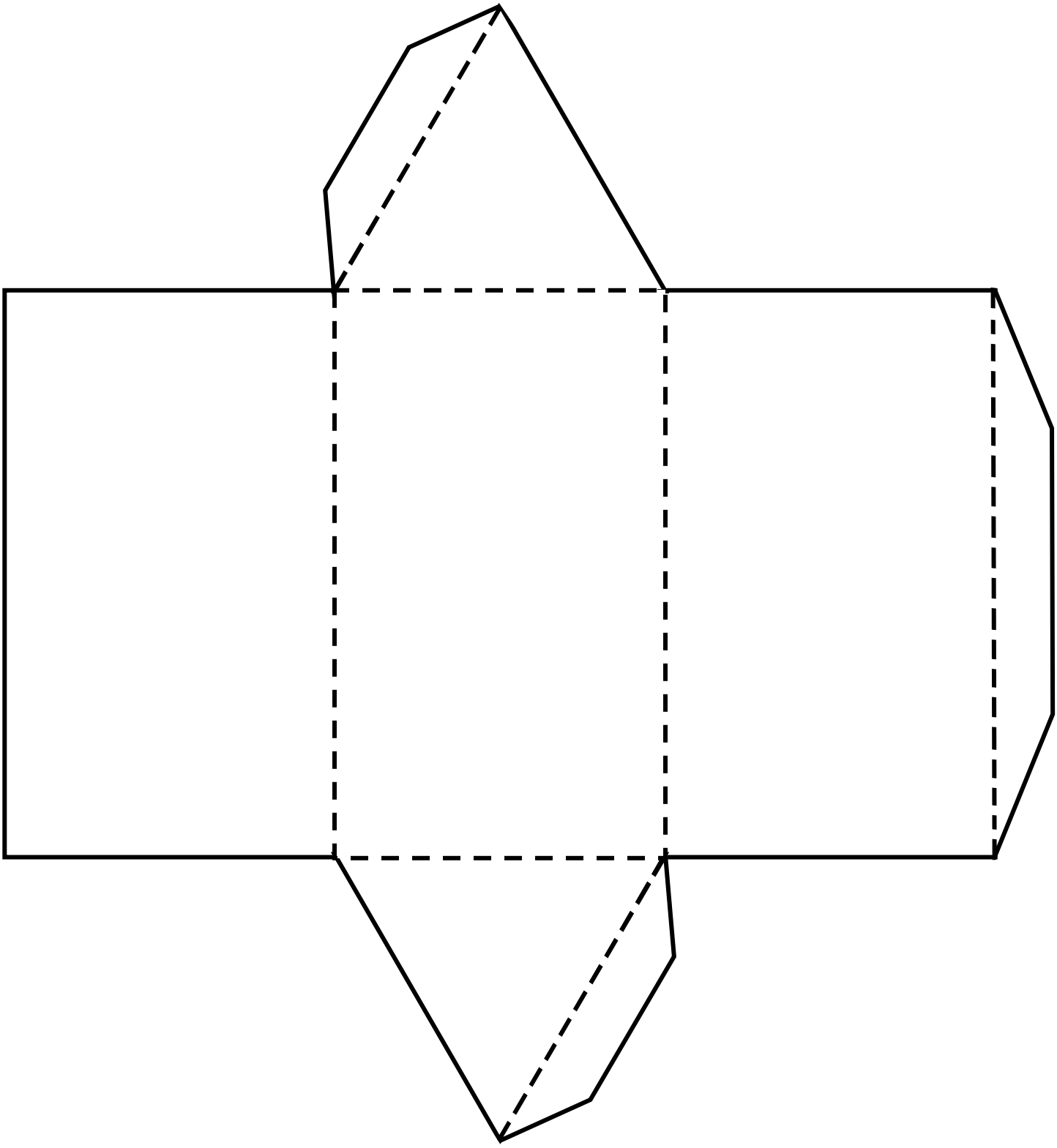
It has ____**6**_____ vertices.

It has ____**9**____edges.

It has____**5**____faces.

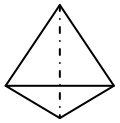




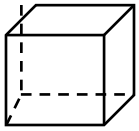


FINAL MISSION

Directions: Read each question and circle the correct answer.

5. This figure is a _____. 

   c. cone
   c. rectangular pyramid
   d. **triangular pyramid**
   d. triangular prism

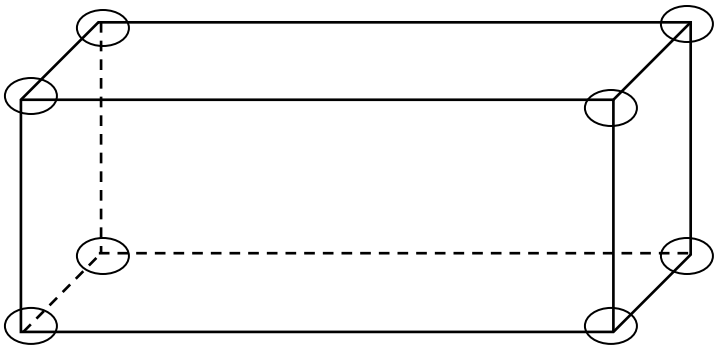
6. This figure is a _____. 

   c. cone
   c. rectangular pyramid
   d. triangular pyramid
   d. **cube**

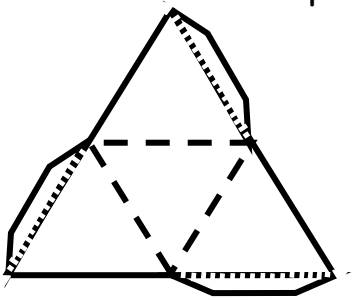
7. A triangular prism has 2 bases that are triangles and 3 faces that are _____.

   c. triangles
   c. **rectangles**
   d. squares
   d. prisms

8. Circle the vertices on the figure below.



Brief Constructed Response



Part A

What 3 dimensional figure does the net above make?

_____triangular pyramid_____

Part B

Use what you know about 3 dimensional figures to explain why your answer is correct. Use number and/or words in your explanation.

Answers should include:

- 3 Triangular face, 1 triangular base
- Pyramids come to a point (vertex) at the top