Geometry B Live Lesson Class

U4L4 – Symmetry
(Ch. 9-4 in textbook)

CONNECTIONS ACADEMY®

Agenda

1. Review topics and problems from Unit 4, Lesson 4 – Symmetry.

2. Use the 2-column note system to take better notes in math class. Bring your math notebook and pen or pencil to each math LiveLesson class.

2-Column Notes Template

1. Announcements/To Do's	1. Write down important details.
2. School-Wide Learner Outcomes	2. What are you going to work on this week?
3. LL Objectives	
4. Vocabulary words	4. Definitions (fill in as we go)
5. Problems	5. Steps to solving problems
6. Summary (End of class)	6. 1 or 2 sentences about the LL class.

Reminders and To – Do's

Information	What to do
1. Complete 1 math lesson per day.	1. Go to your Planner in Connexus to find the math lesson for the day
2. Check your WebMail every day	2. Go to Connexus to find WebMail
3. Be prepared to spend 4 - 6 hours per day on schoolwork.	3. Complete lessons for the day from your Planner. Do not get behind on lessons.
4. Remind your Learning Coach to take daily attendance	4. Have your Learning Coach log into Connexus daily.

Reminders and To – Do's

Information	What to do
5. Go to the Message Board first for information about our math class.	
6. Contact Mr. Elizondo for math questions. Remember: You need at least 2 phone calls with Mr. Elizondo per semester.	6. Call (559) 549 - 3244 and leave a voicemail if call is not answered. Make an appointment at: https://elizondo.youcanbook.me Send a WebMail

U4L4 – California Common Core State Standards

- HSG-CO.A.3: Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.

U4L4 – Objectives

- Identify the type of symmetry in a figure

- What are the different types of symmetry?

U4L4 – Vocabulary Words

- line of symmetry
- line symmetry
- point of symmetry
- reflection symmetry
- rotational symmetry
- symmetry

U4L4 – Key Words

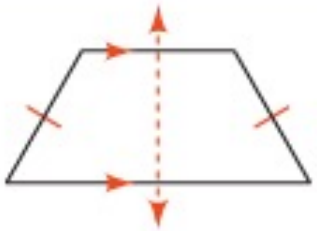
A figure has **symmetry** if there is an isometry that maps the figure onto itself.

U4L4 – Concept Corner – Symmetry

take note

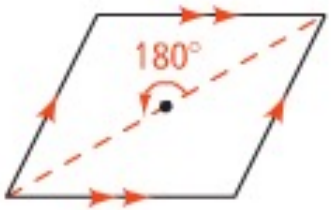
Key Concept Types of Symmetry

A figure has **line symmetry** or **reflectional symmetry** if there is a reflection for which the figure is its own image. The line of reflection is called a **line of symmetry.** It divides the figure into congruent halves.



A figure has **rotational symmetry** if there is a rotation of 180° or less for which the figure is its own image. The angle of rotation for rotational symmetry is the smallest angle needed for the figure to rotate onto itself.

A figure with 180° rotational symmetry also has **point symmetry.** Each segment joining a point and its 180° rotation image passes through the center of rotation.

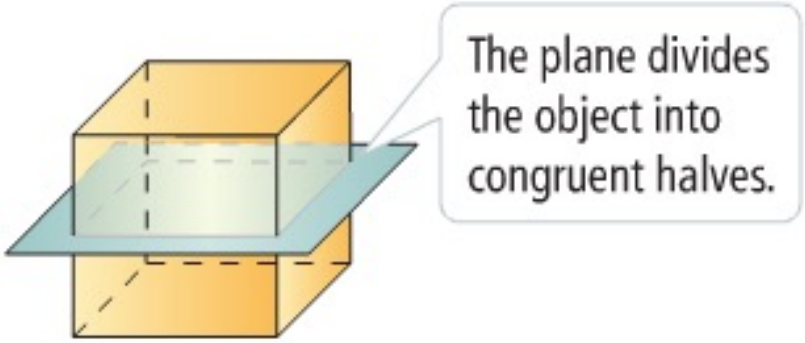


A square, which has both 90° and 180° rotational symmetry, also has point symmetry.

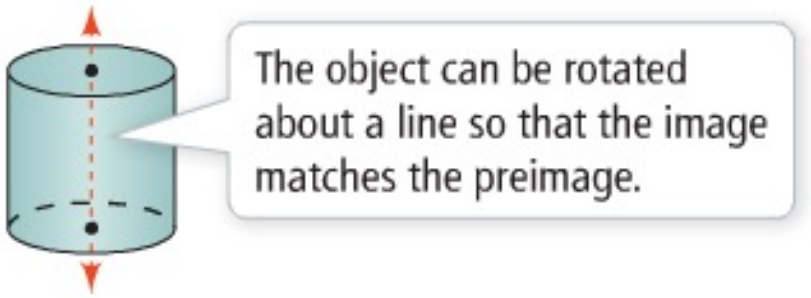
U4L4 – Concept Corner – Three-Dimensional Symmetry

- Three-dimensional objects can also have various types of symmetry.

Reflectional Symmetry



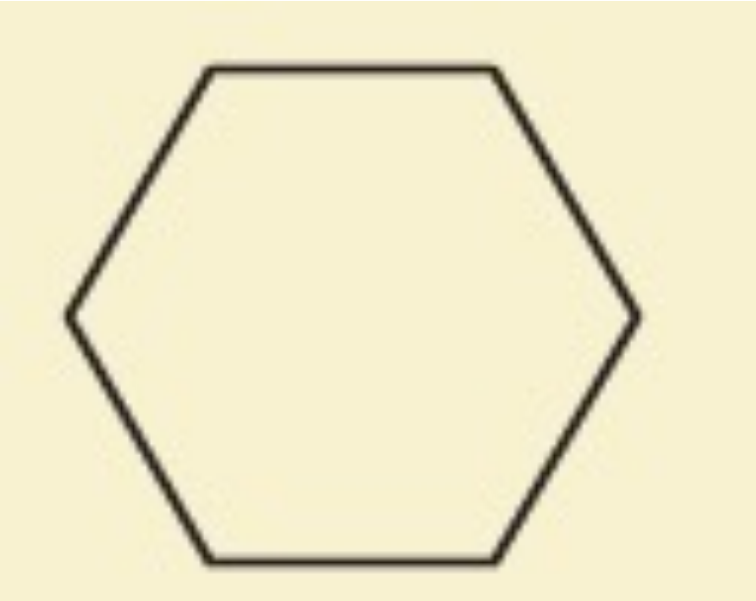
Rotational Symmetry



Can you think of any other 3-D objects that have reflectional or rotational symmetry? (Hint: look around the room!)

U4L4 – Practice Problems – **Symmetry**

Tell if the figure has
(a) line symmetry,
(b) rotational symmetry,
or
(c) point symmetry.



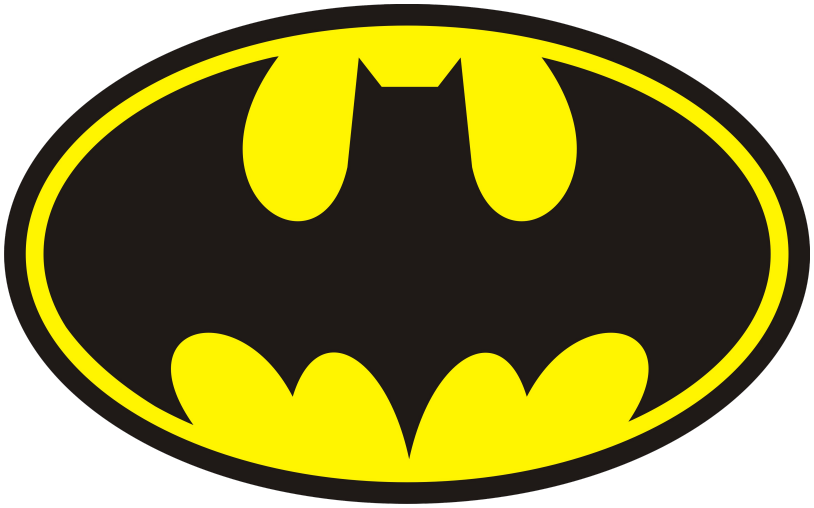
a) A regular hexagon has 6 lines of symmetry.

b) This figure has **rotational symmetry**. It can be rotated 180 degrees and it still looks like the same image.

c) Because it has rotational symmetry, it also has **point symmetry**.

U4L4 – Practice Problems – Symmetry

Tell if the figure has
(a) line symmetry,
(b) rotational symmetry,
or
(c) point symmetry.



a) This figure has 1 line of symmetry.

b) This figure does not have rotational symmetry. It must be rotated 360 degrees to get the same figure.

c) Since no rotational symmetry, no point symmetry.

U4L4 – Practice Problems – Symmetry

Tell if the figure has
(a) line symmetry,
(b) rotational symmetry,
or
(c) point symmetry.

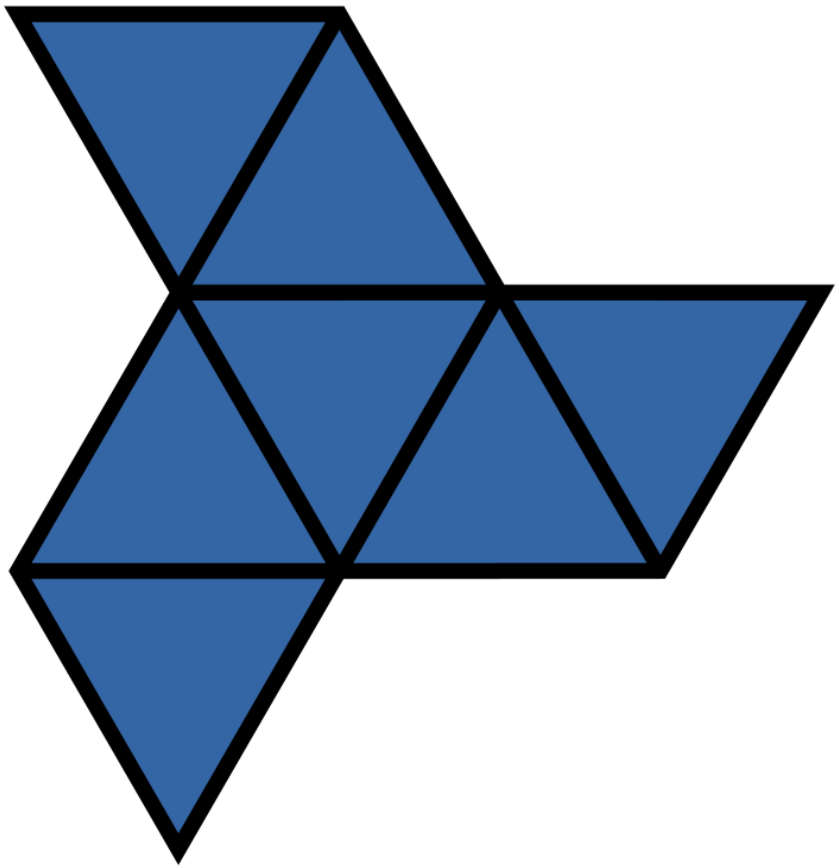
a) This figure has 2 lines of symmetry.

b) This figure has rotational symmetry.

c) Because it has rotational symmetry, it also has point symmetry

U4L4 – Practice Problems – Symmetry

Tell if the figure has
(a) line symmetry,
(b) rotational symmetry,
or
(c) point symmetry.



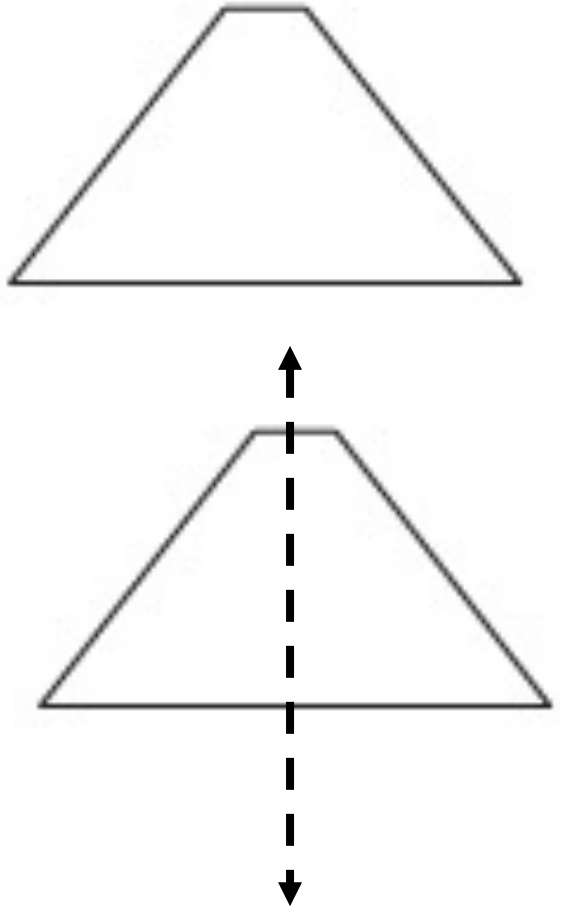
a) No lines of symmetry.

b) This figure has rotational symmetry.

c) Because it has rotational symmetry, it also has point symmetry

U4L4 – Practice Problems – Symmetry

Tell if the figure has
(a) line symmetry,
(b) rotational symmetry,
or
(c) point symmetry.



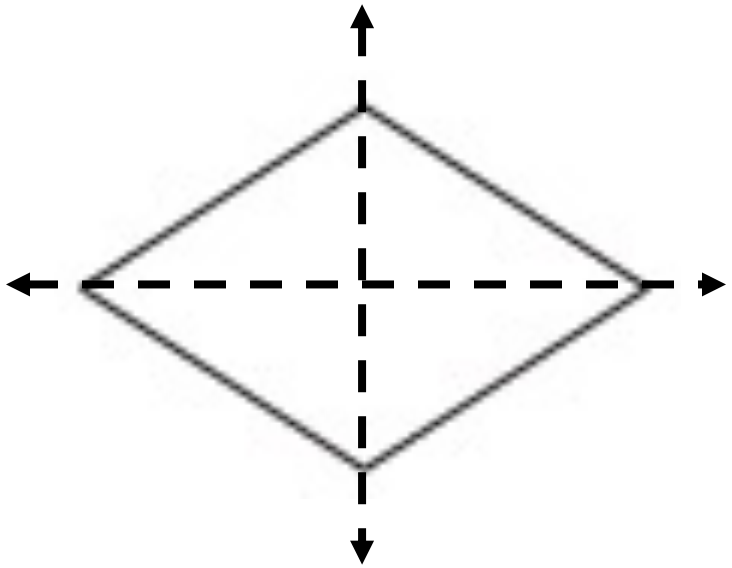
a) This figure has 1 line of symmetry.

b) No rotational symmetry. It would have to rotate 360-degrees to get the same figure.

c) Since no rotational symmetry, no point symmetry

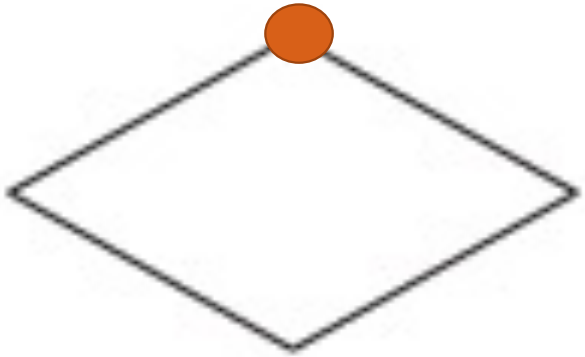
U4L4 – Practice Problems – Symmetry

Tell if the figure has
(a) line symmetry,
(b) rotational symmetry,
or
(c) point symmetry.



a) This figure has 2 lines of symmetry.

b) This figure has rotational symmetry. 180-degree angle of rotation.



c) This figure has point symmetry

U4L4 – Practice Problems – Symmetry

Tell if the figure has
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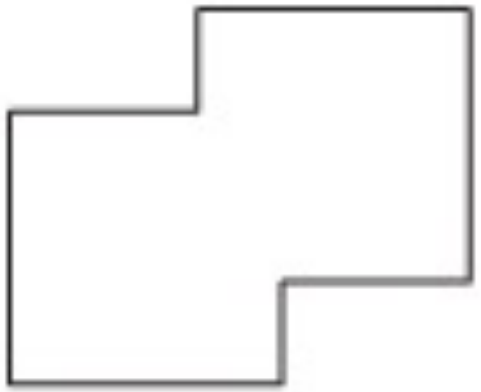
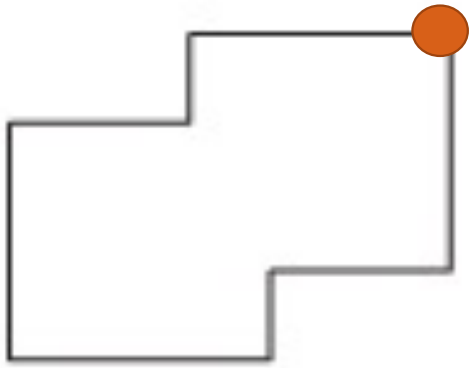
or
(c) point symmetry.



a) No line symmetry

b) This figure has rotational symmetry. 180-degree angle of rotation.



c) This figure has point symmetry

U4L4 – Practice Problems – Symmetry

Tell if the figure has
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or
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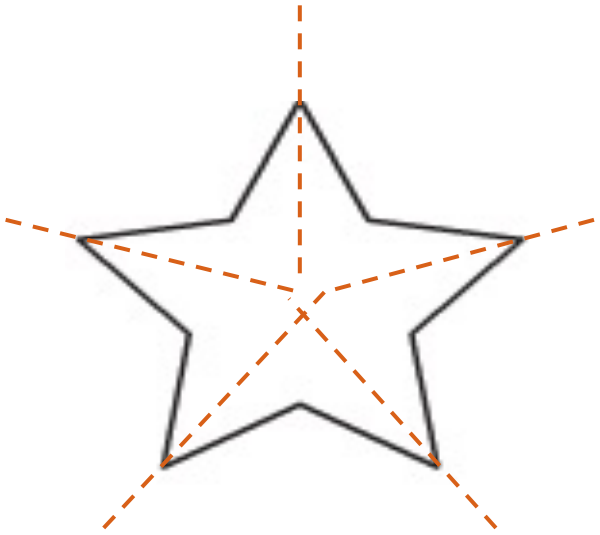

a) This figure has 5 lines of symmetry.

b) This figure has rotational symmetry. The angle of rotation is 72 degrees.

c) Because it has rotational symmetry, it also has point symmetry

U4L4 – Reflection

What are the different types of symmetry?

A figure can have line symmetry or rotational symmetry. If the angle of rotation is 180 degrees, the figure also has point symmetry.

Three-dimensional figures can also have reflectional symmetry or rotational symmetry.

Questions?

- Check the Message Board first
- Send a WebMail
- You can also make an appointment at https://elizondo.youcanbook.me
- You can also call me at (559) 549-3244. If I'm not available to answer your call, please leave a voicemail with your full name and phone number.