4

Mathematics 4
Microlearning Module

QUARTER 3 – Module 14
Drawing the Image of an Object after Applying Reflection with Respect to a line, including Glide Reflection

Microlearning Module

REGION XII - DIVISION OF SULTAN KUDARAT

GOVERNMENT PROPERTY
NOT FOR SALE

Math 4
Microlearning Module (MLM)
Quarter 1 – Module 14: Drawing the image of an image after applying reflection with respect to a line, including glide reflection.
First Edition, 2024

Republic Act 8293, Section 176 states that “No copyright shall subsist in any work of the Government of the Philippines.” However, obtaining prior approval from the government agency or office where the work originated is required for the commercial use of such work. This agency or office may, among other things, impose as a condition the payment of royalties.

Materials borrowed for this module (e.g., songs, stories, poems, images, brand names, trademarks, etc.) are the property of their respective copyright owners. The publisher and authors do not assert ownership or representation over them.

Published by the Department of Education- RO XII, Division of Sultan Kudarat

Development Team

Writer : Hamad M. Ali
Editor : Roger B. Famulag
Evaluator : Renante S. Gura
Cover Art Designer: Jann Mark P. Oriel
Management Team: Crispin A. Soliven Jr., CESE – Schools Division Superintendent
Meilrose B. Peralta EdD – Asst. Schools Division Superintendent
Ismael M. Ambalgan – Chief, CID
Sheryl L. Osano – EPS, LRMS
Rodolfo B. Bermudo Jr. EdD – EPS, Mathematics

Printed in the Philippines by

Department of Education – Region XII, Division of Sultan Kudarat

Office Address: Kenram, Isulan, Sultan Kudarat
Telefax: 064-471-1007
E-mail Address: depedsk.r12@deped.gov.ph

MICROLEARNING MODULE

Name: _____Grade & Sec: _____ Score: _____

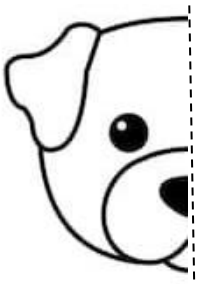
Subject: Mathematics 4 Quarter: 3 MLM No. 14

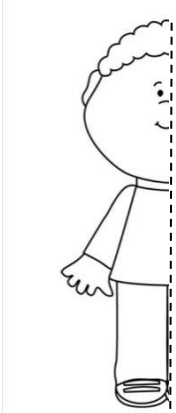
Teacher: _____

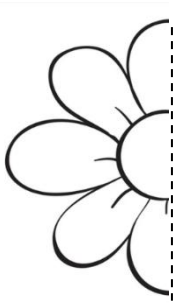
Competency: Draw the image of an object after applying reflection to a line, including glide reflection.

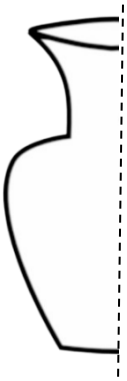
A. Look Back!

Direction: *Draw the other half of each picture.*

1. 

2. 

3. 

4. 

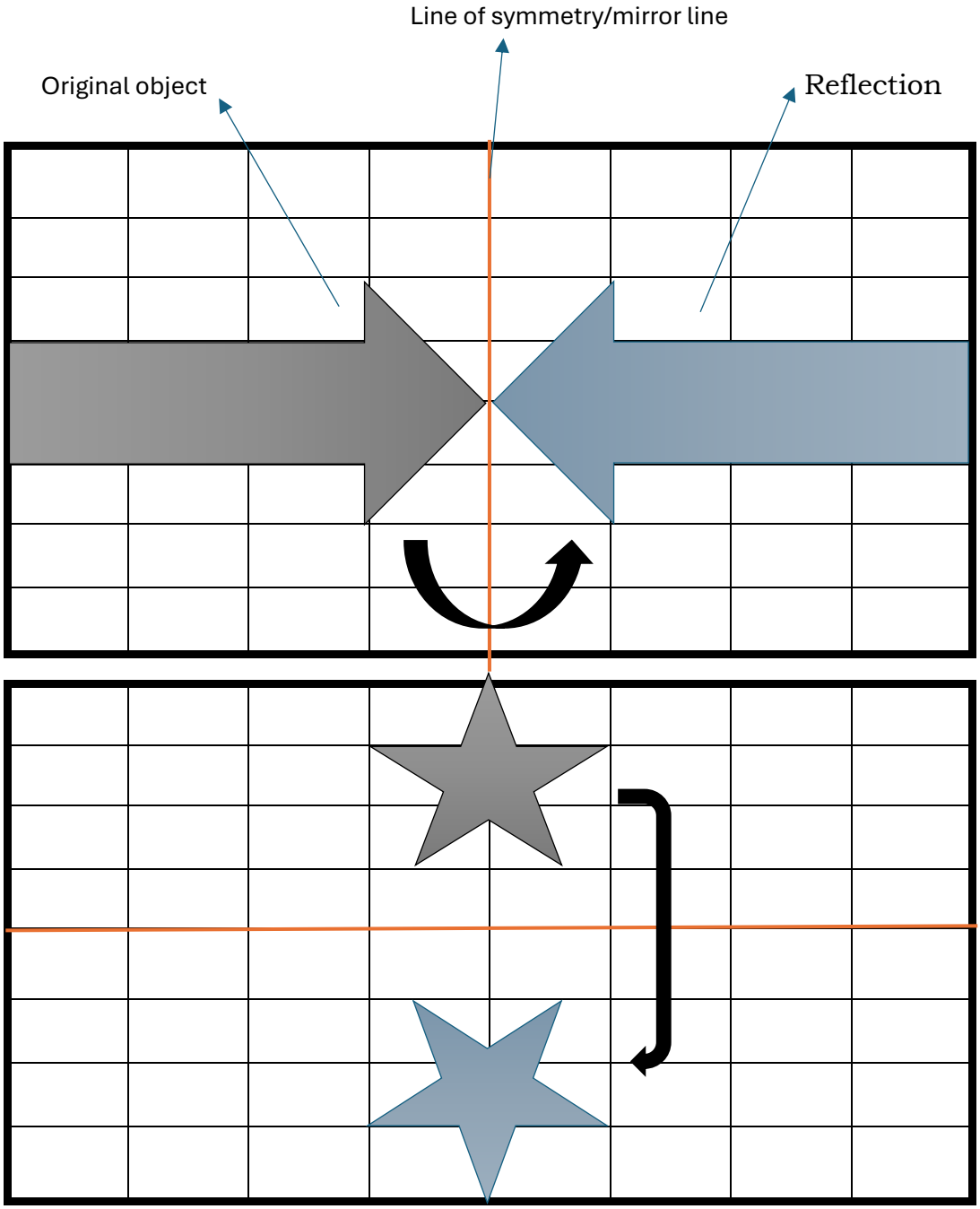
B. What's New?

Look at the picture below.

1. What do you see when you look at the image?
2. Can you find a line in the middle where the image looks the same on both sides?
3. What does the house look like in the reflection on the river?

C. What Is It?

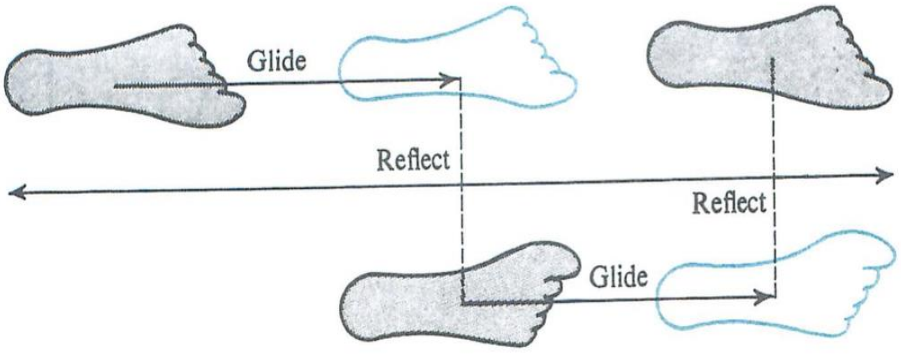
A ***reflection*** is a transformation that acts like a mirror. It swaps all pairs of points that are on exactly opposite sides of the line of reflection.



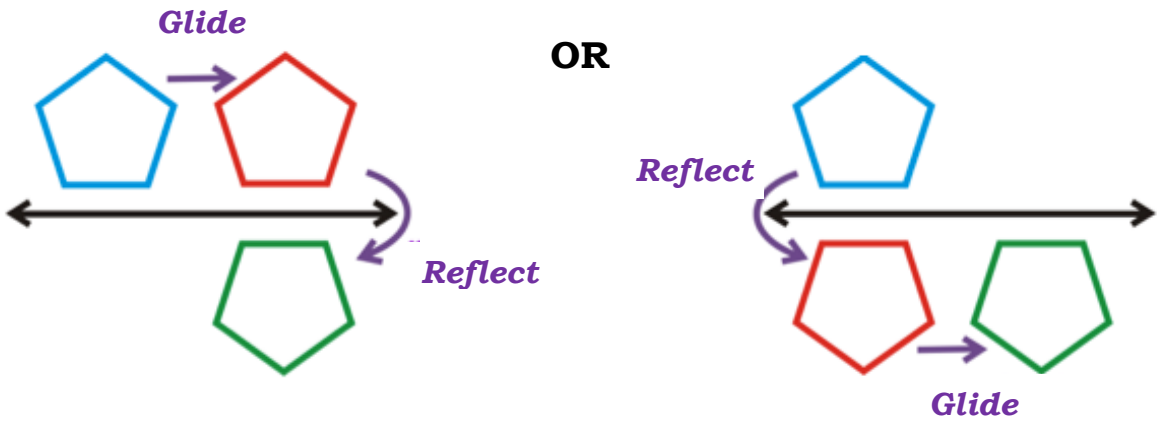
Glide reflections have symmetry that is used in the real world. Examples of these include the leaves on a branch and footprints in the sand. In these glide reflections, if two glide reflections occur then the pre-image is in the same position. With the leaves on a branch, the leaf is reflected over the branch, and the line of symmetry slides down the branch, then that leaf reflects over the branch and slides down the branch further. The final leaf which returns to the original orientation of the initial leaf is called the pre-image.

Example of Glide reflection

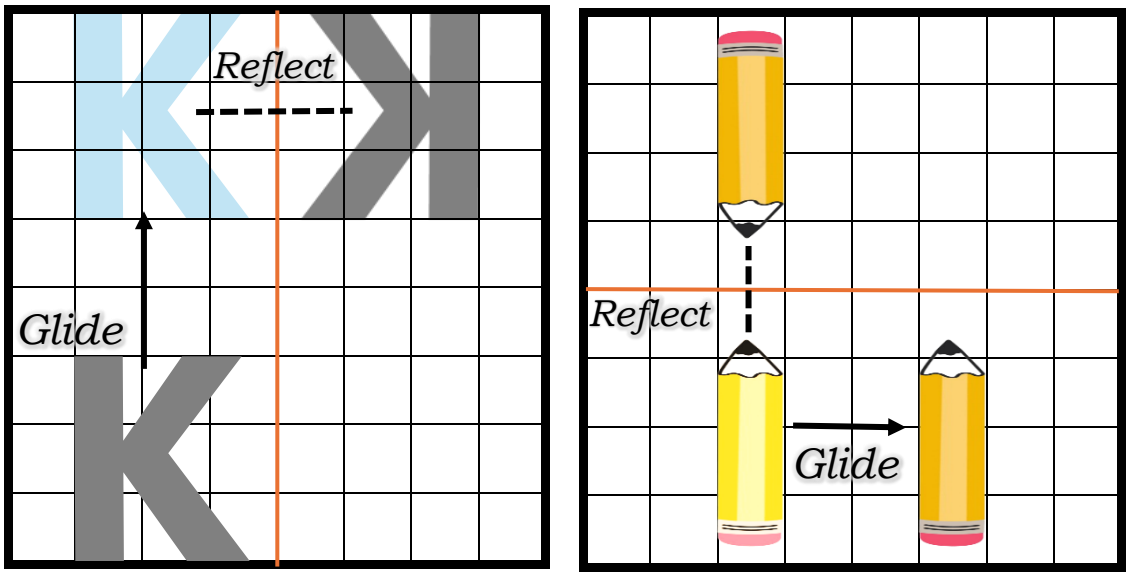
In everyday life, a classic example of glide reflection is the track of footprints left in the sand by a person walking on it. In the diagram below, the translation (glide) performed on the foot reflects across the parallel line of translation, then glides again followed by the refection. These footsteps are the typical example of a glide reflection.



Furthermore, a glide reflection is commutative; whether we glide first then reflect, or we reflect first and then glide, the outcome remains the same.



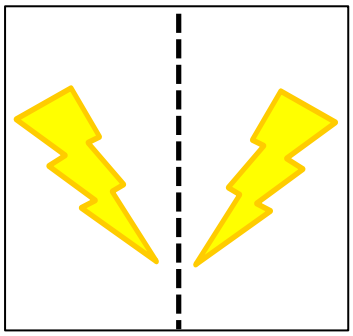
Here are some examples of drawing the image of an object after applying reflection with respect to a line including glide reflection.



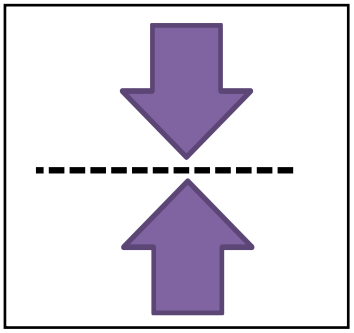
D. Let's try!

Activity 1

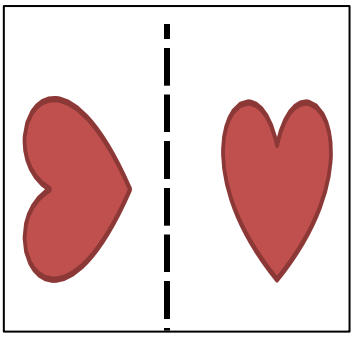
Directions: Put (✓) if the image has a correct reflection and (**X**) if not.



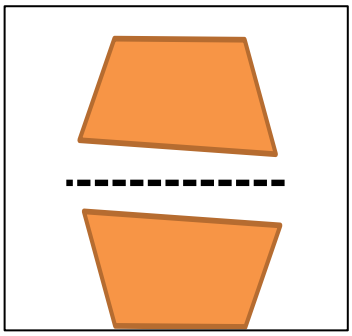
1. _____



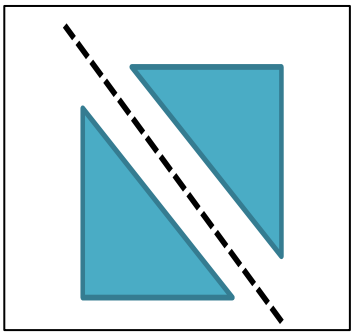
2. _____



3. _____



4. _____

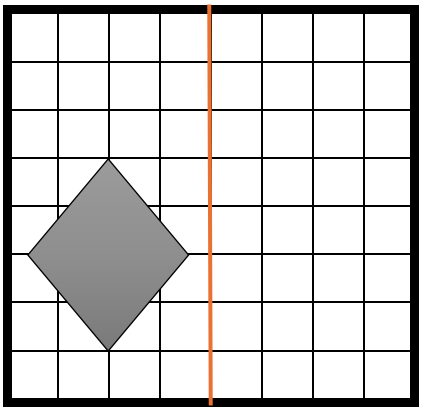


5. _____

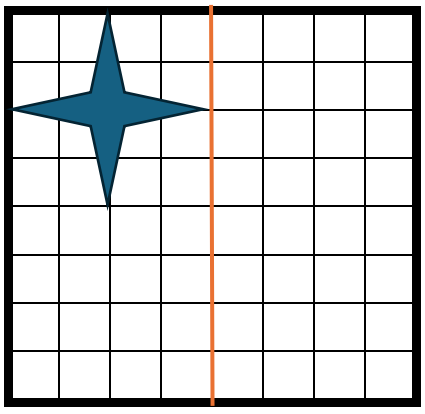
Activity 2

Directions: Draw the reflection of each shape below.

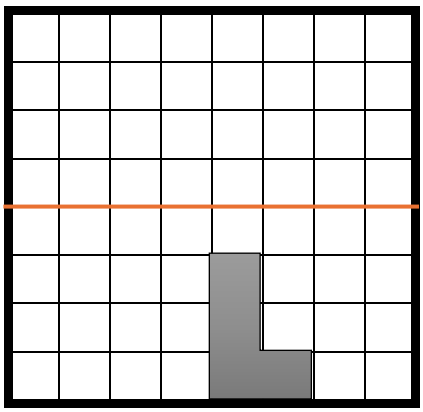
_____ **1.**



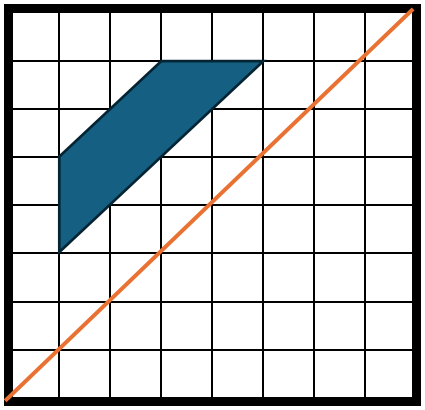
_____ **3.**



____ 2.



____ 4.

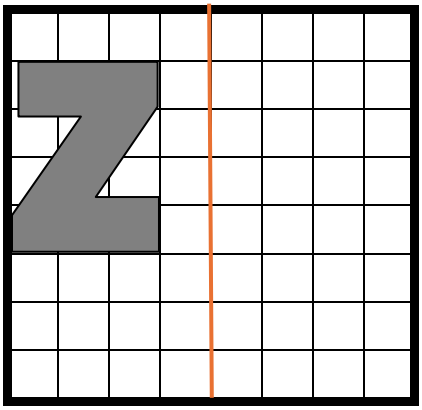


E. Let's Evaluate

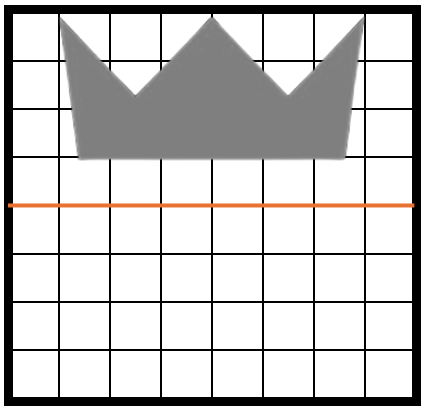
Activity 1

Directions: Draw the image of each object after applying reflection.

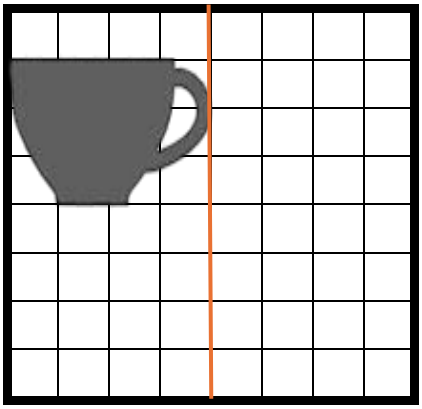
____ 1.



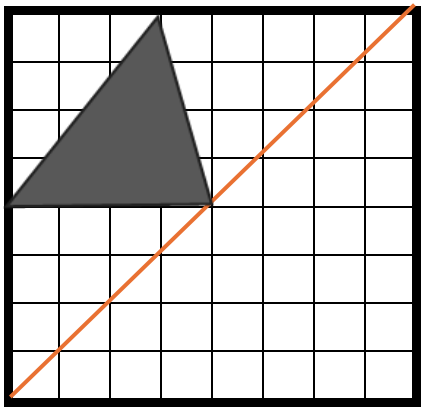
____ 3.



____ 2.



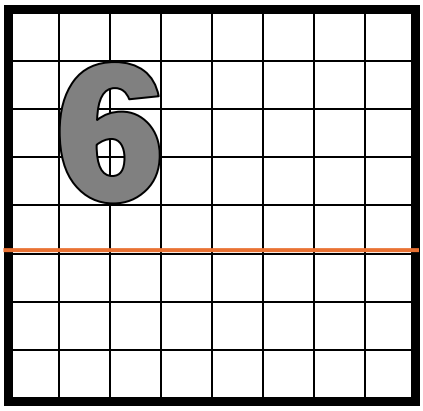
____ 4.



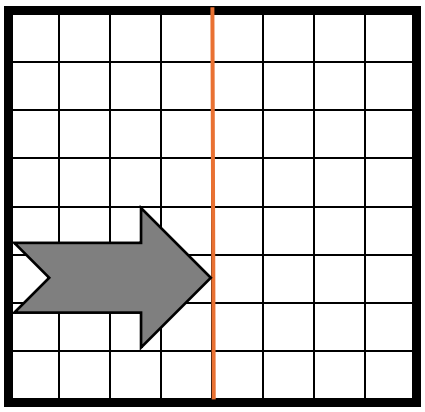
Activity 2

Direction: Draw the image of an object after applying reflection with respect to a line including a glide reflection.

___2.



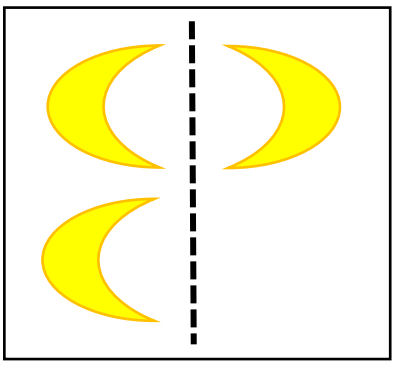
____1.



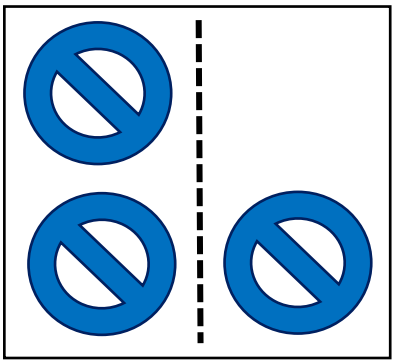
CHALLENGE!

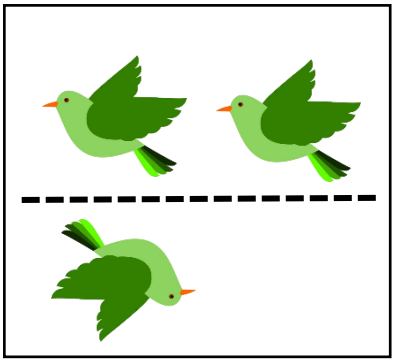
Directions: Write **Yes** if each image is reflected with a glide reflection and write **No** if not.

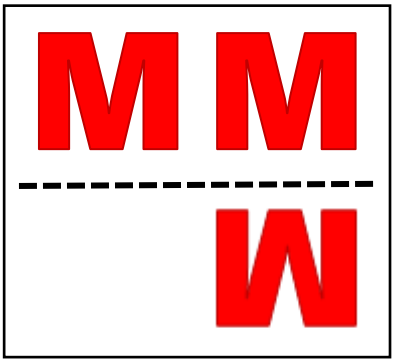
_____ 1.

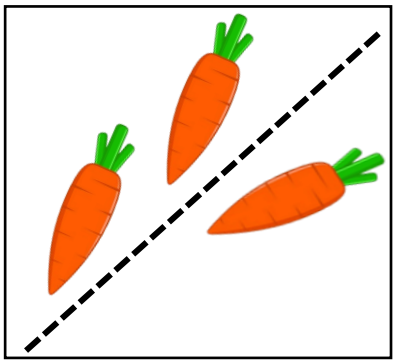


_____ 2.



_____ 3. 

_____ 4. 

_____ 5. 

F. References

"Glide Reflection in Geometry: Definition & Example." *Study.com*. Accessed October 15, 2024. https://study.com/academy/lesson/glide-reflection-in-geometry-definition-example.html.

DISCLAIMER

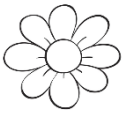
This Microlearning Module has been developed by DepEd - Division of Sultan Kudarat for educational purposes only. It is designed to supplement classroom instruction and should not be used as the sole source of information. Teachers are encouraged to exercise their professional discretion and tailor the content to suit their students' individual needs.

This resource is the exclusive property of DepEd-Division of Sultan Kudarat and is accessible to enrolled learners solely for academic purposes, at no cost. Any reproduction or conversion of this material in any form is strictly prohibited.

REGION XII - DIVISION OF SULTAN KUDARAT

Math Grade4 Q3 LC14 Answer Key

Look Back

1. 
3. 

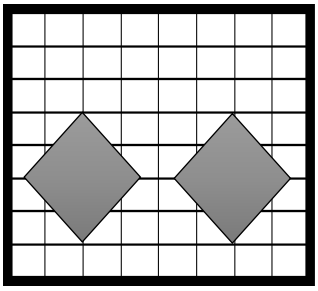
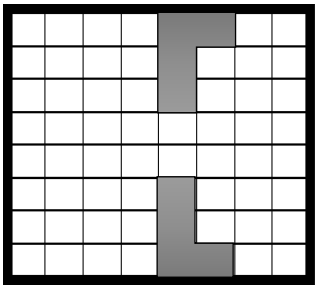
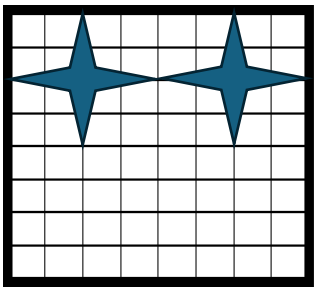
2. 
4. 

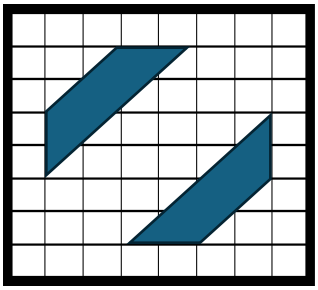
Let's Try

Activity 1

1. ✓
2. ✓
3. ***X***
4. ***X***
5. ✓

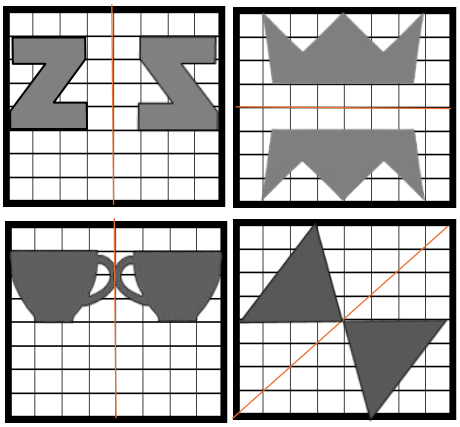
Activity 2

1. 
2. 
3. 

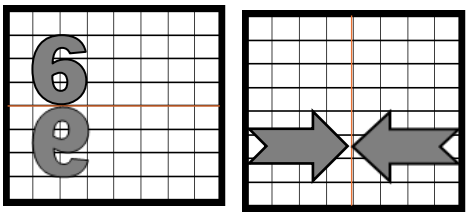
4. 

Let's Evaluate

Activity 1



Activity 2



Challenge Activity

1. **Yes**
2. **Yes**
3. **No**
4. **No**
5. **Yes**