

1

Purposeful Design

MATHEMATICS

THIRD EDITION

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LM

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DM

2.1A Rectangle, Square, Triangle, and Hexagon
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LM 2.1A Chapter 2 Parent Letter



Dear Parents,

We are beginning Chapter 2 in the Purposeful Design Mathematics Grade 1 book. In this chapter, we will introduce shapes, continue to work with patterns, and learn more about numbers and counting.

Your child will learn about shapes such as trapezoids, rhombuses, and ovals. You may wish to reinforce your child's learning at home by having a scavenger hunt. Help your child look for

objects that have specific shapes or patterns. Take a walk outside with your child to look for patterns in nature that only God can create. Look for shapes that have symmetry, such as seashells or pinecones. As your child becomes more familiar with the concepts of pattern and symmetry, you will be assisting your child in gaining familiarity with the names and attributes of geometric shapes—the foundation for later studies in geometry.

A focus on counting continues in this chapter, with a review of numbers 1–20 and the introduction of skip counting by 2s, 5s, and 10s. In class, counting and skip counting will be introduced with manipulatives. You can assist your child in learning to skip count by setting out small toys, toothpicks, or other objects. Have your child group the objects into sets of 2, 5, or 10 and then count the objects by skip counting. Any extra practice you provide will help your child master the concept of skip counting more quickly.

Students will also study the hundred chart and learn about ordinal numbers—first, second, third, and so on. These counting activities provide a solid foundation for the introduction of fact families in Chapter 3.

Have fun thinking of new games to play and new manipulatives to use as you watch your child learn to love mathematics.



LM 2.1B Project: Shape Day Description

The following project can be used any time prior to Lesson 2.8 as an additional activity or informal assessment. Assign students to one of four groups that correspond to a shape; there is a circle group, a square group, a rectangle group, and a triangle group.

- Have students create headbands with their group's shape glued to the front to wear on Shape Day. Encourage students to select clothing that includes a pattern with their shape on it. Students may bring food to share at a class party celebrating Shape Day. Each group should present their shape by drawing examples or by showing objects that have their assigned shape.

- Ideas you can share with each group include:

	circle	square	rectangle	triangle
foods	cookies, circle-shaped cereal, pineapple or kiwi fruit slices	square-shaped cheese crackers or cookies	granola bars, bar cookies, half-sandwiches	cheese wedges, triangular crackers
games	Duck, Duck, Goose; playing catch with a round flying disc	building the tallest tower with square blocks, kickball, hopscotch, four square, checkers	card games, dominoes, basketball, soccer	three-way catch, build a pyramid, play with triangular blocks, paper airplanes
music	tambourine, flat drum	square-shaped mandolin, sitar, or banjo	xylophone, harmonica, piano	triangle

- Games that could be played by all group members include:
 1. Have each group hunt for their shape in the classroom for a set amount of time. (You can hide die-cut shapes ahead of time for the class to find.)
 2. Have each group list as many objects as they can think of with their shape in a set amount of time.
 3. Have groups race to make the assigned shape with their bodies if you have access to a large area.
 4. Have groups use art materials to prepare drawings or sculptures of their shape.
- Have students complete **LM 2.1C Project: Shape Day** and use the rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess student work, and then send it home.



Name _____

LM 2.1C Project: Shape Day

Group members _____

Complete the exercises below.

1. My group's shape is _____.
2. This shape is special because _____
_____.
3. My favorite part of Shape Day was _____
_____.
4. Something I learned about shapes is _____.

Use the following as a checklist for your project. When you have checked the boxes in the first column, you are finished!

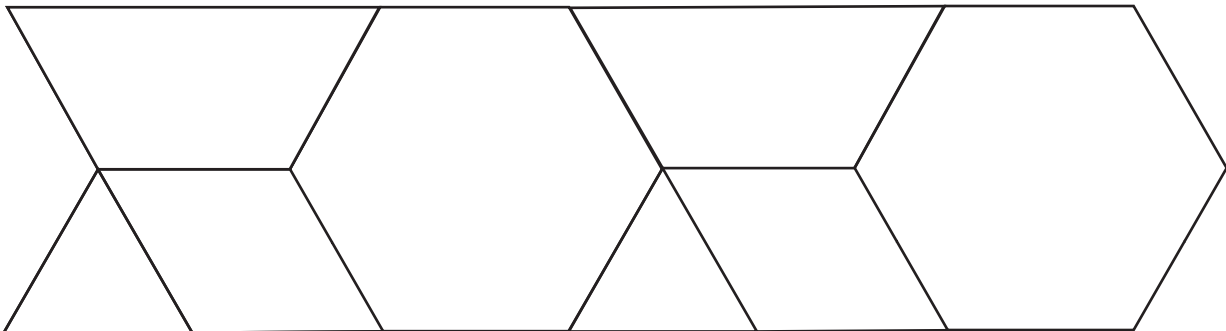
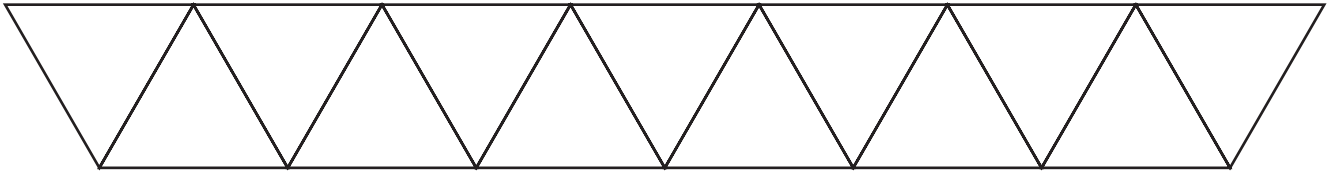
student		teacher
☐	I made a shape headband with my group's shape.	☐
☐	I participated in my group's shape presentation.	☐
☐	I brought something with my shape to share with the class.	☐
☐	I filled out the exercises on the Project: Shape Day page.	☐
	Total	☐

Scoring Guide: 4 Excellent 3 Well done 2 Good 1 Needs work

Teacher Comments:



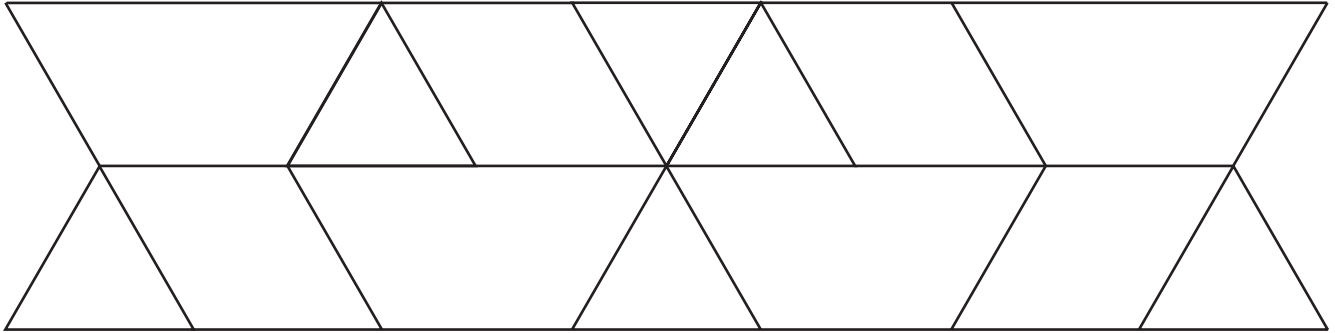
LM 2.2A Pattern Building



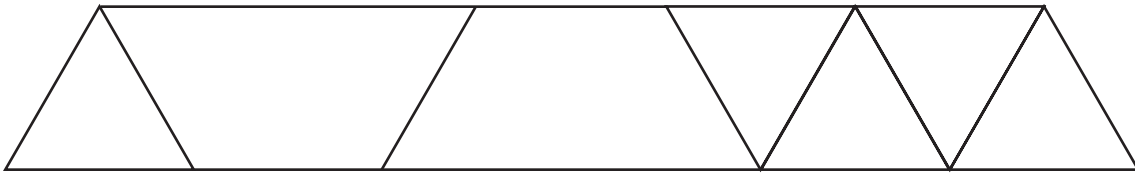


LM 2.3A Extending Patterns

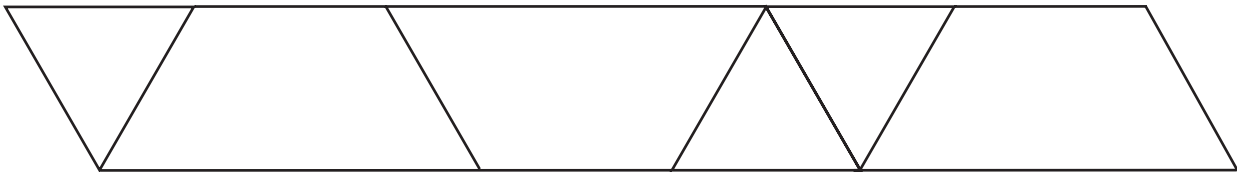
1.



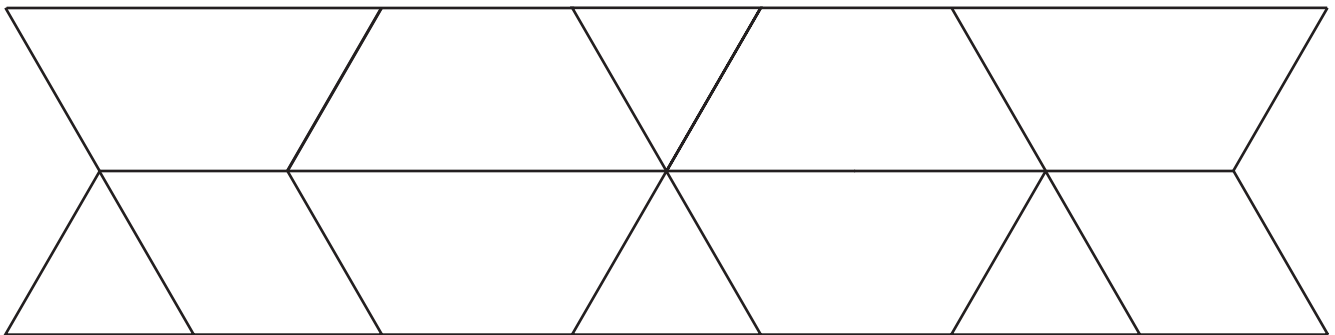
2.



3.



4.



Name _____

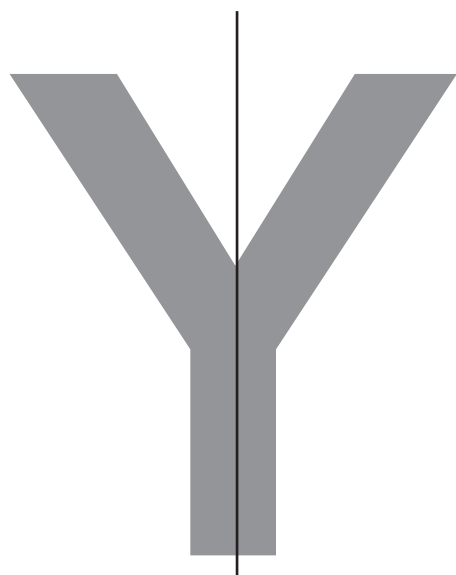
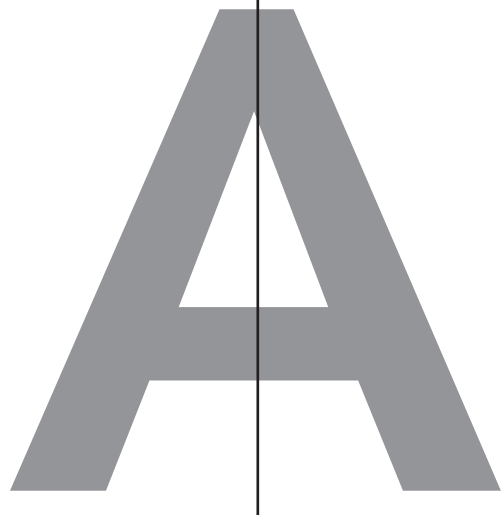
LM 2.5A Letter Shapes

Use a mirror to check for a line of symmetry. Draw the line.

A**B****R****S****Y****Z**

**LM 2.5A Letter Shapes**

Use a mirror to check for a line of symmetry. Draw the line.



Name _____

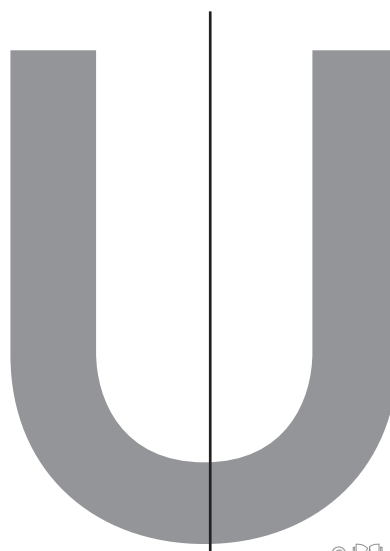
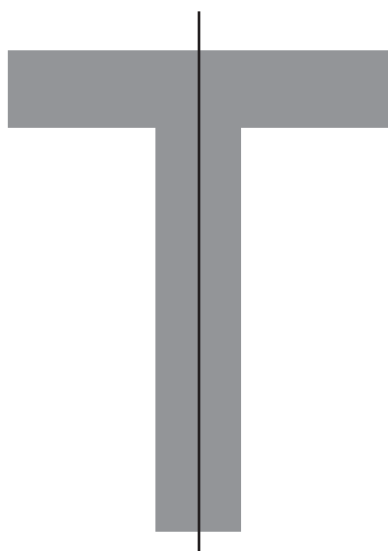
LM 2.5B Letter Shapes

Use a mirror to check for a line of symmetry. Draw the line.

D**P****E****G****T****U**

**LM 2.5B Letter Shapes**

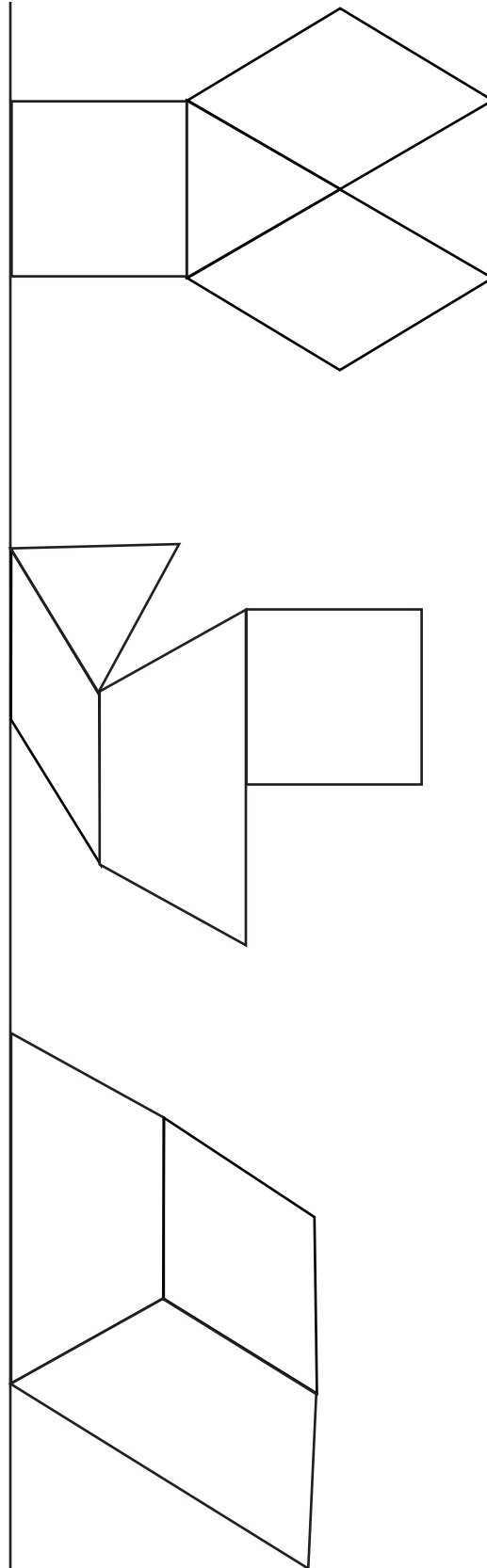
Use a mirror to check for a line of symmetry. Draw the line.



Name _____

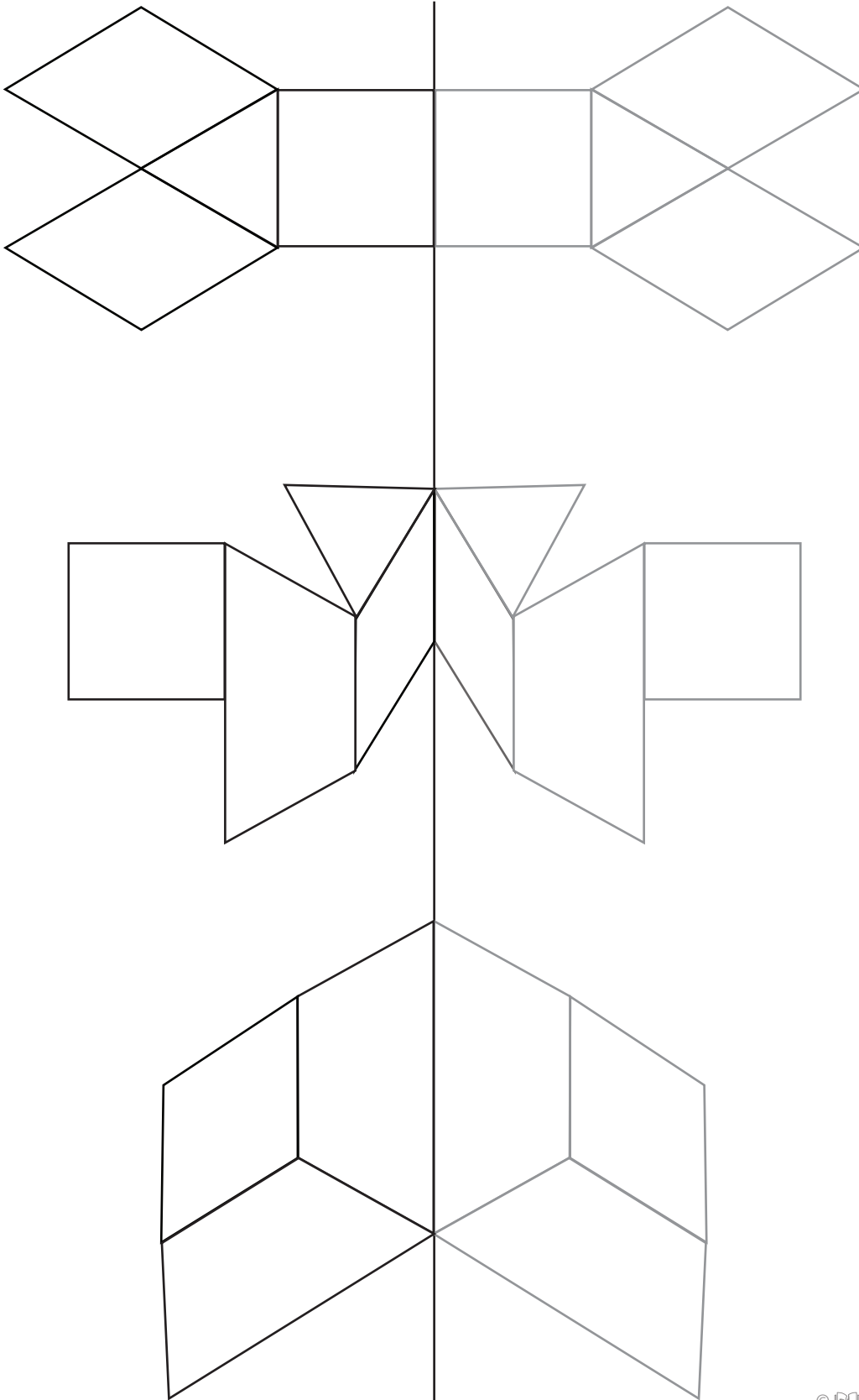
LM 2.5C Shape Reflection

Use mirrors to show symmetry.



LM 2.5C Shape Reflection

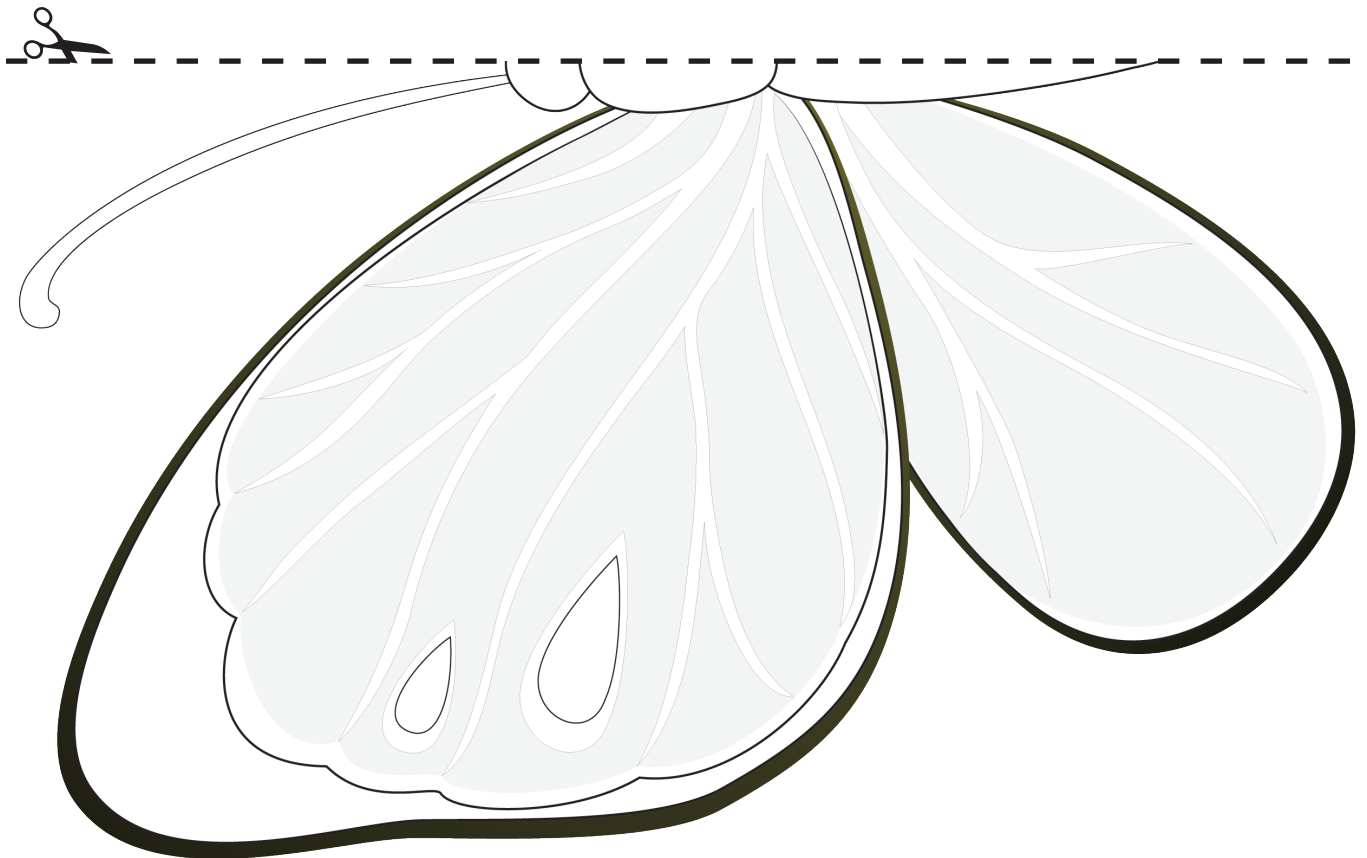
Use mirrors to show symmetry.





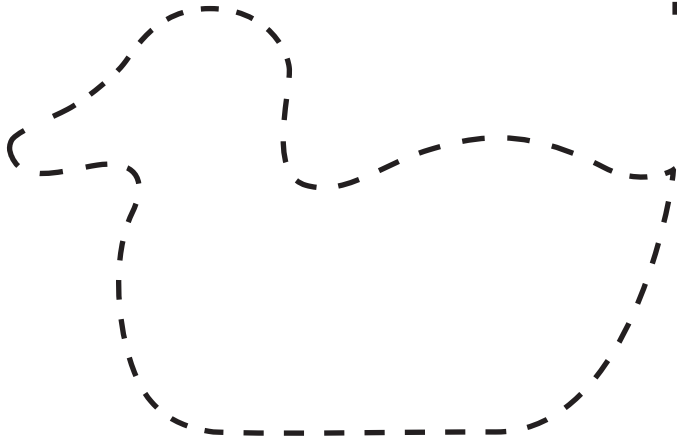
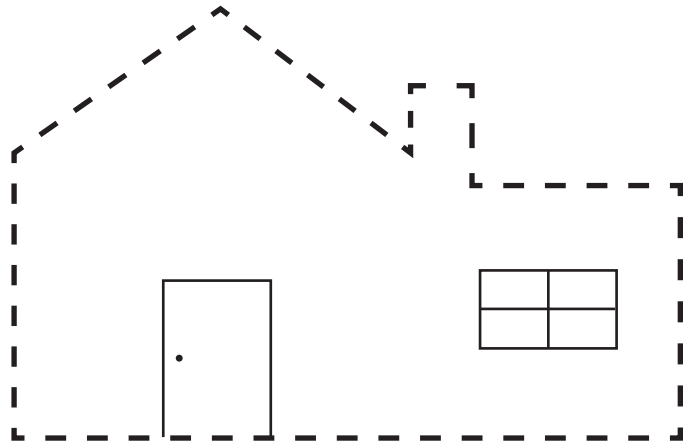
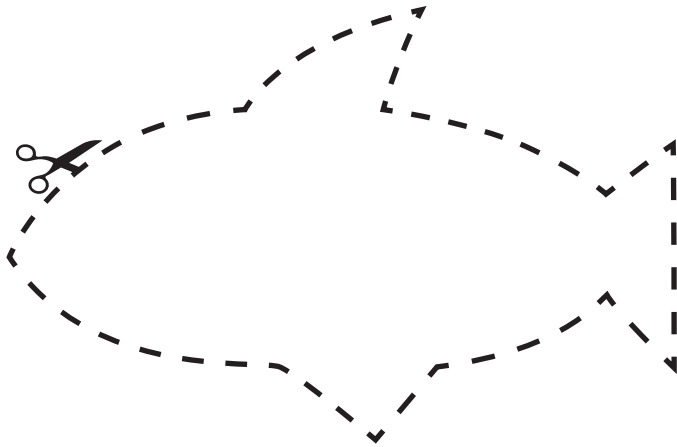
Name _____

LM 2.5D Butterfly Pattern





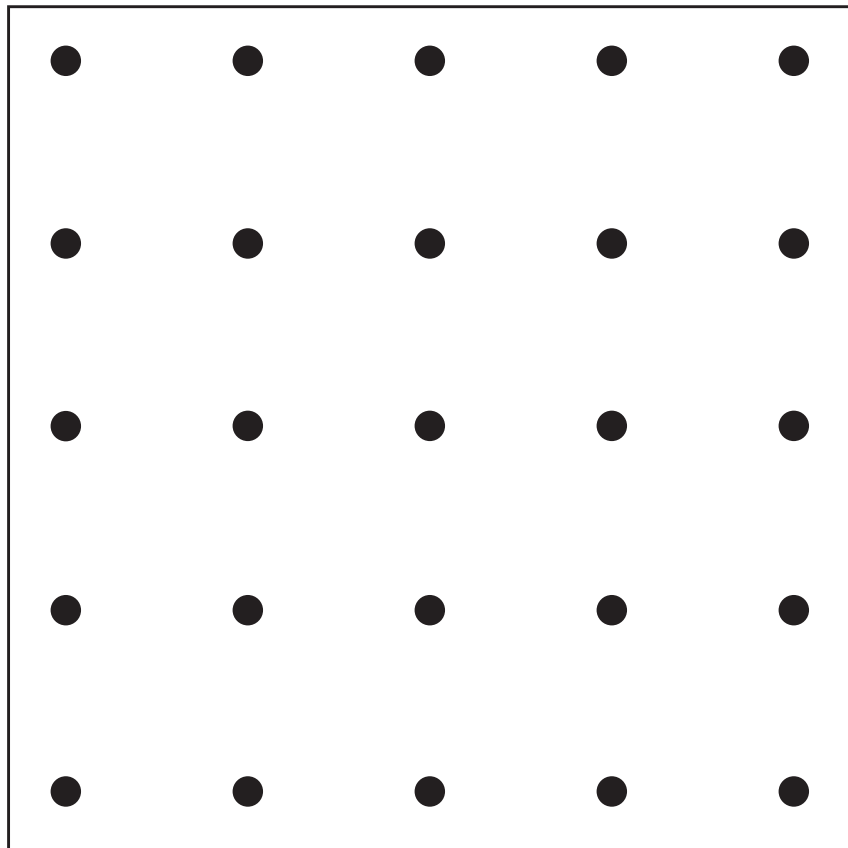
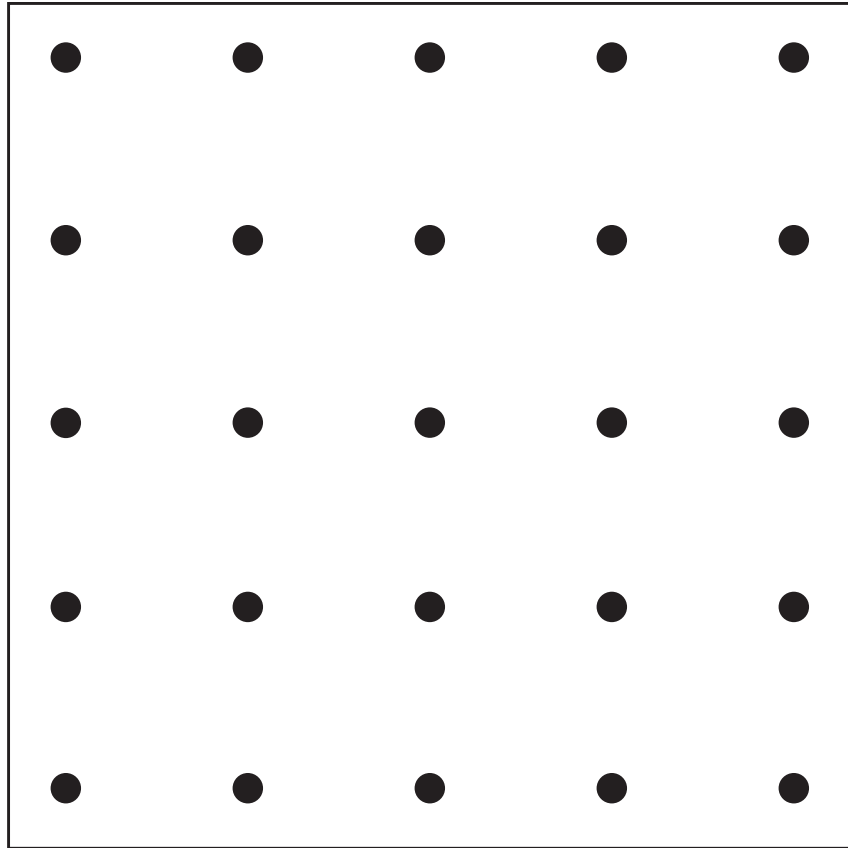
LM 2.6B Shape Translation Patterns





Name _____

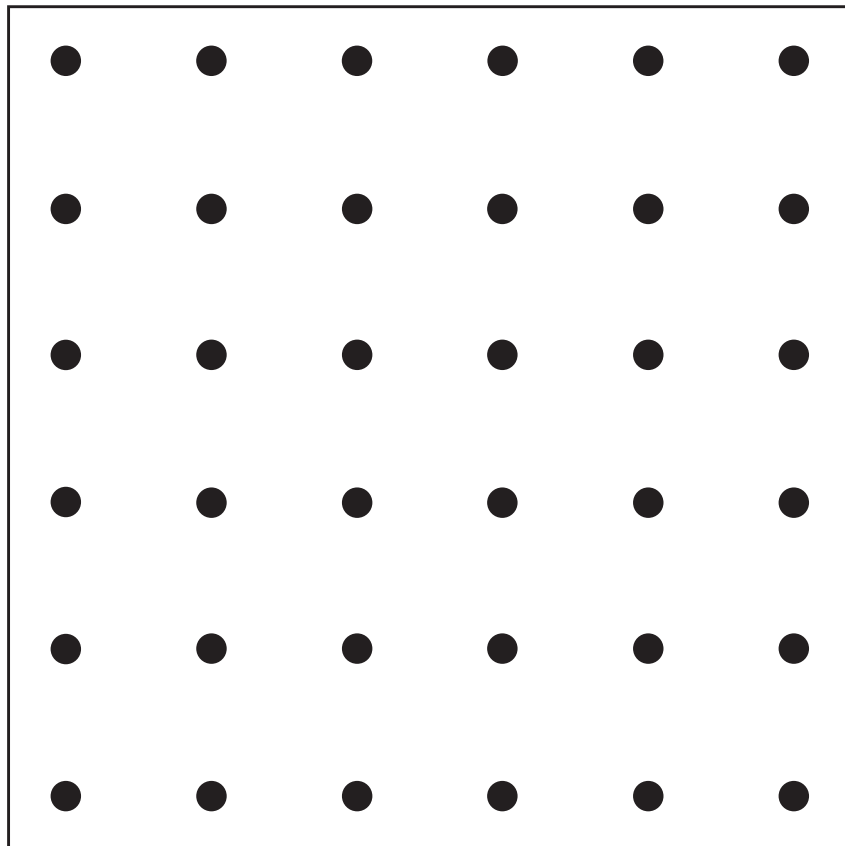
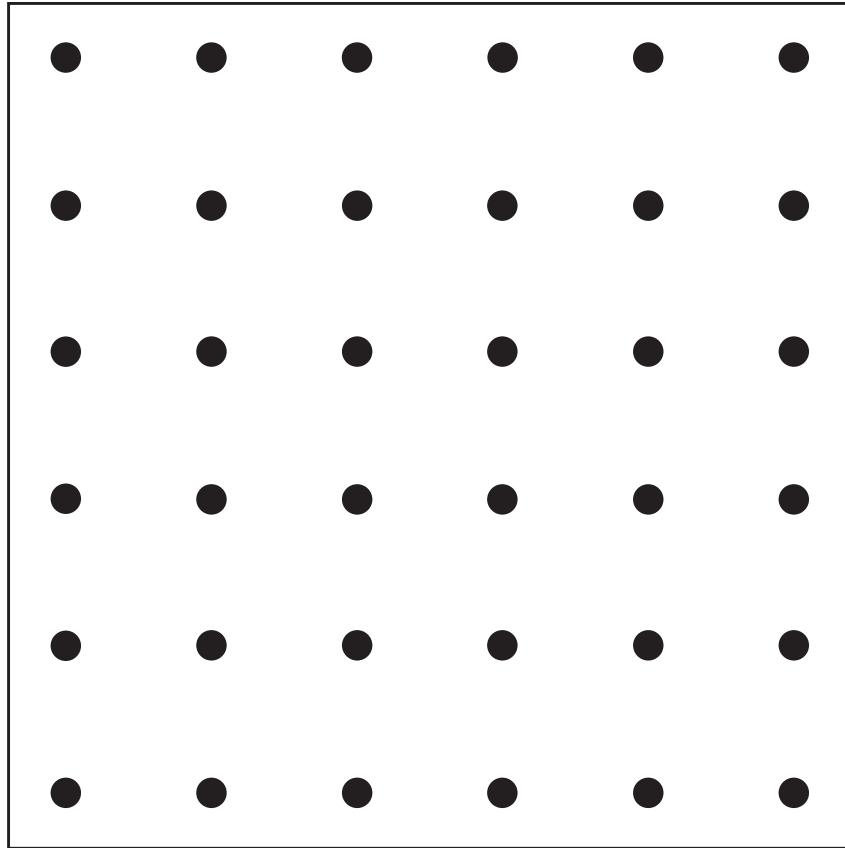
LM 2.6C Dot Paper Geoboards (5 × 5)





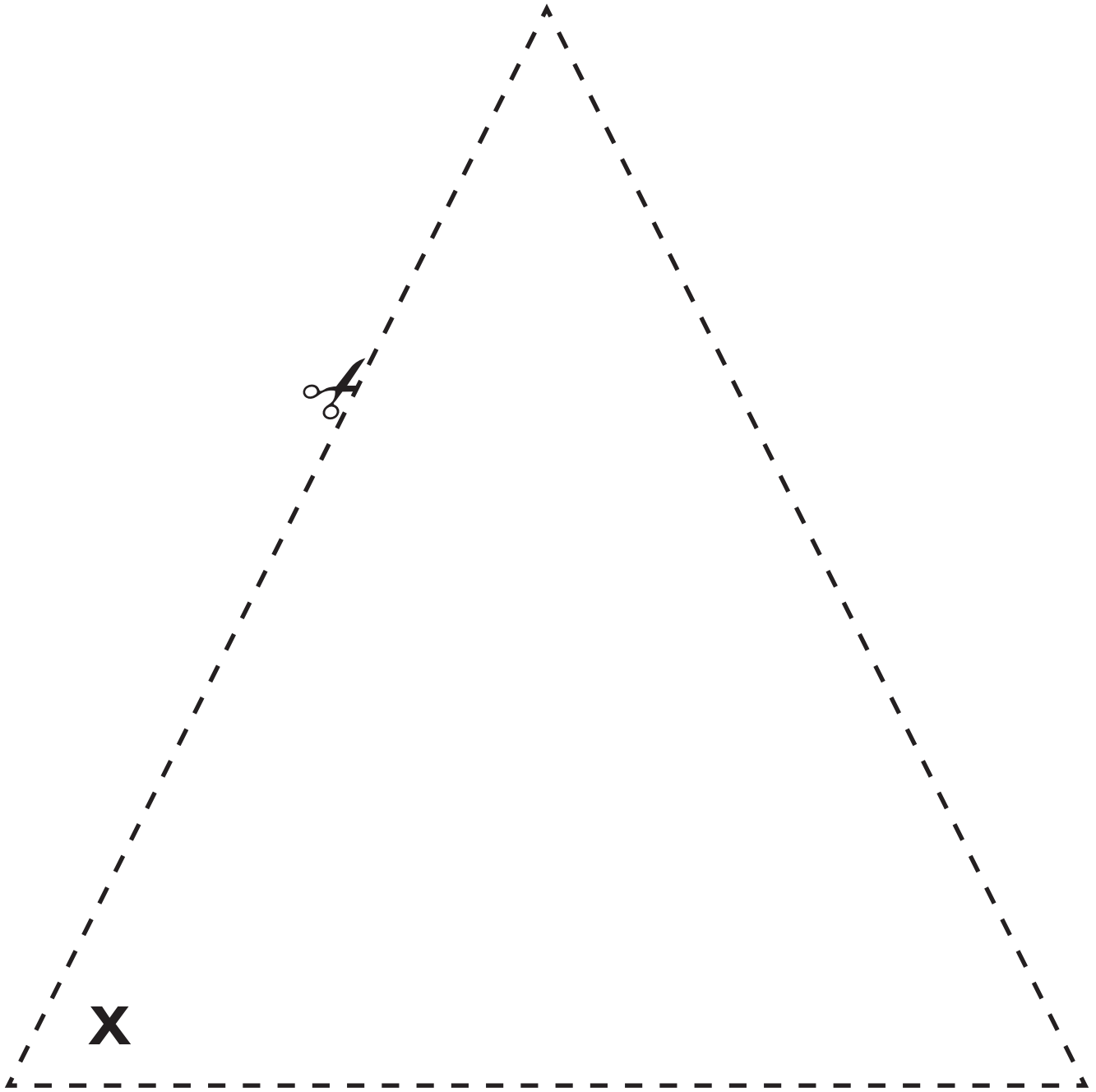
Name _____

LM 2.6D Dot Paper Geoboards (6 × 6)



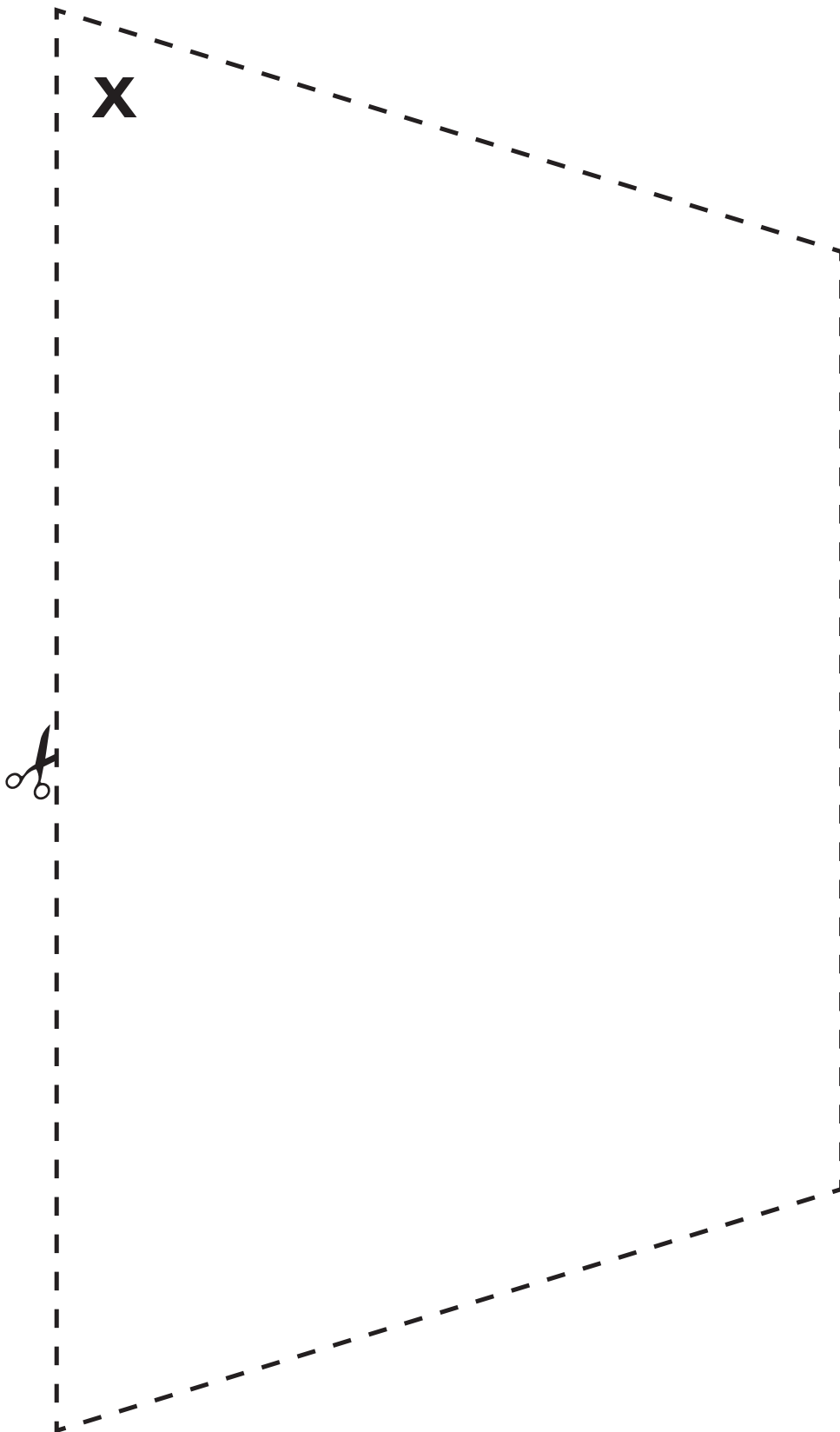


LM 2.7A Shapes



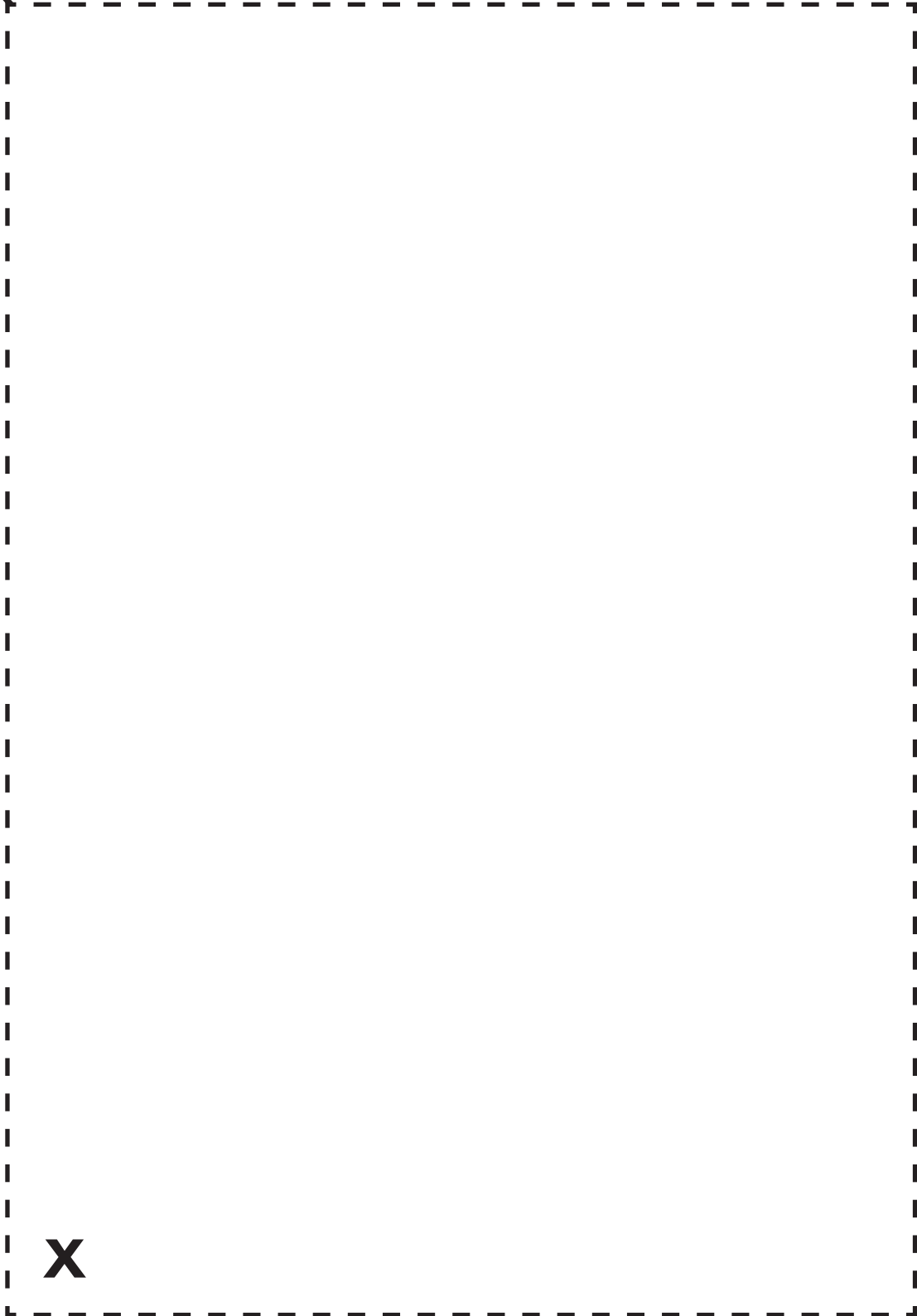


LM 2.7B Shapes





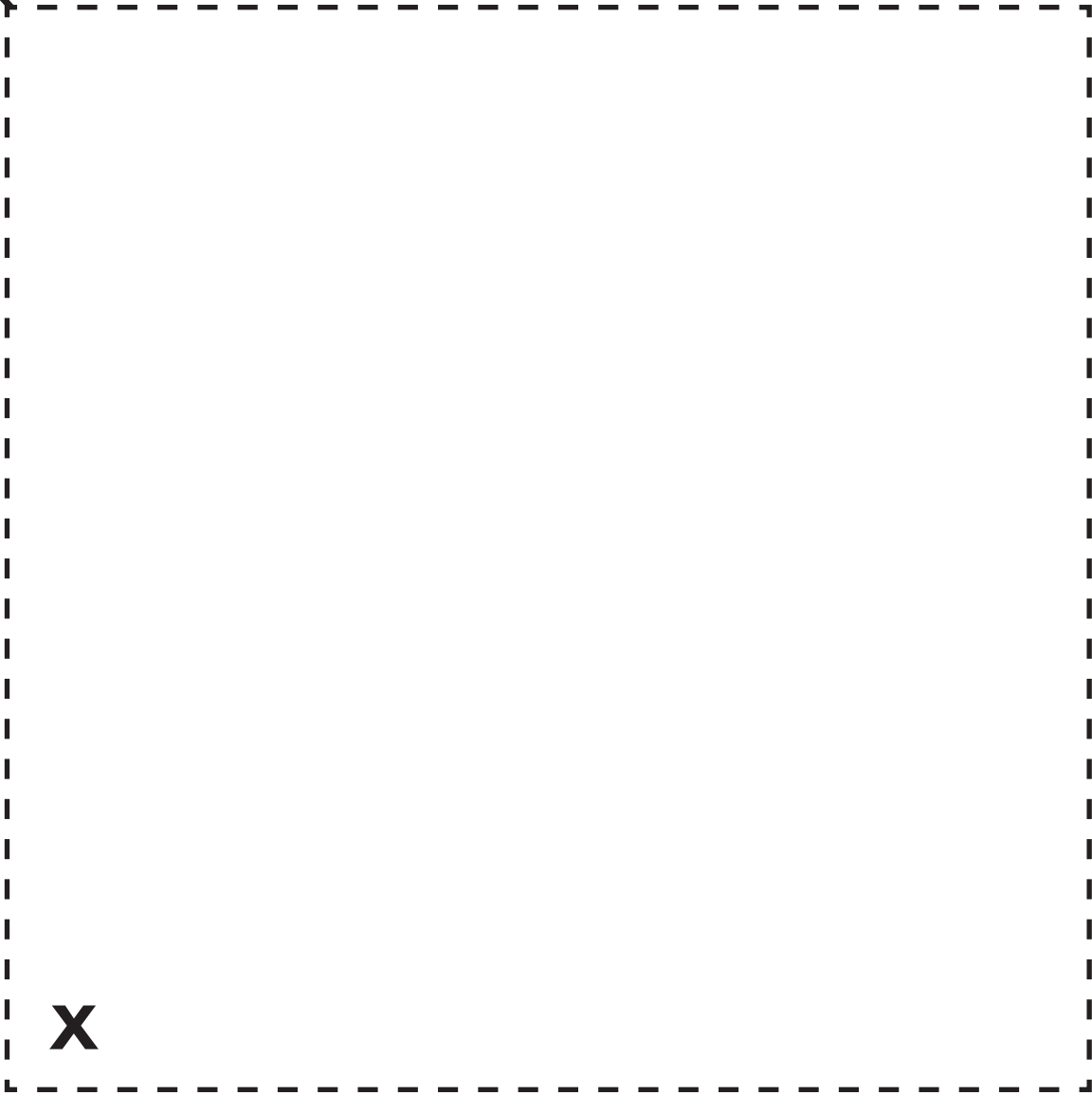
LM 2.7C Shapes



X



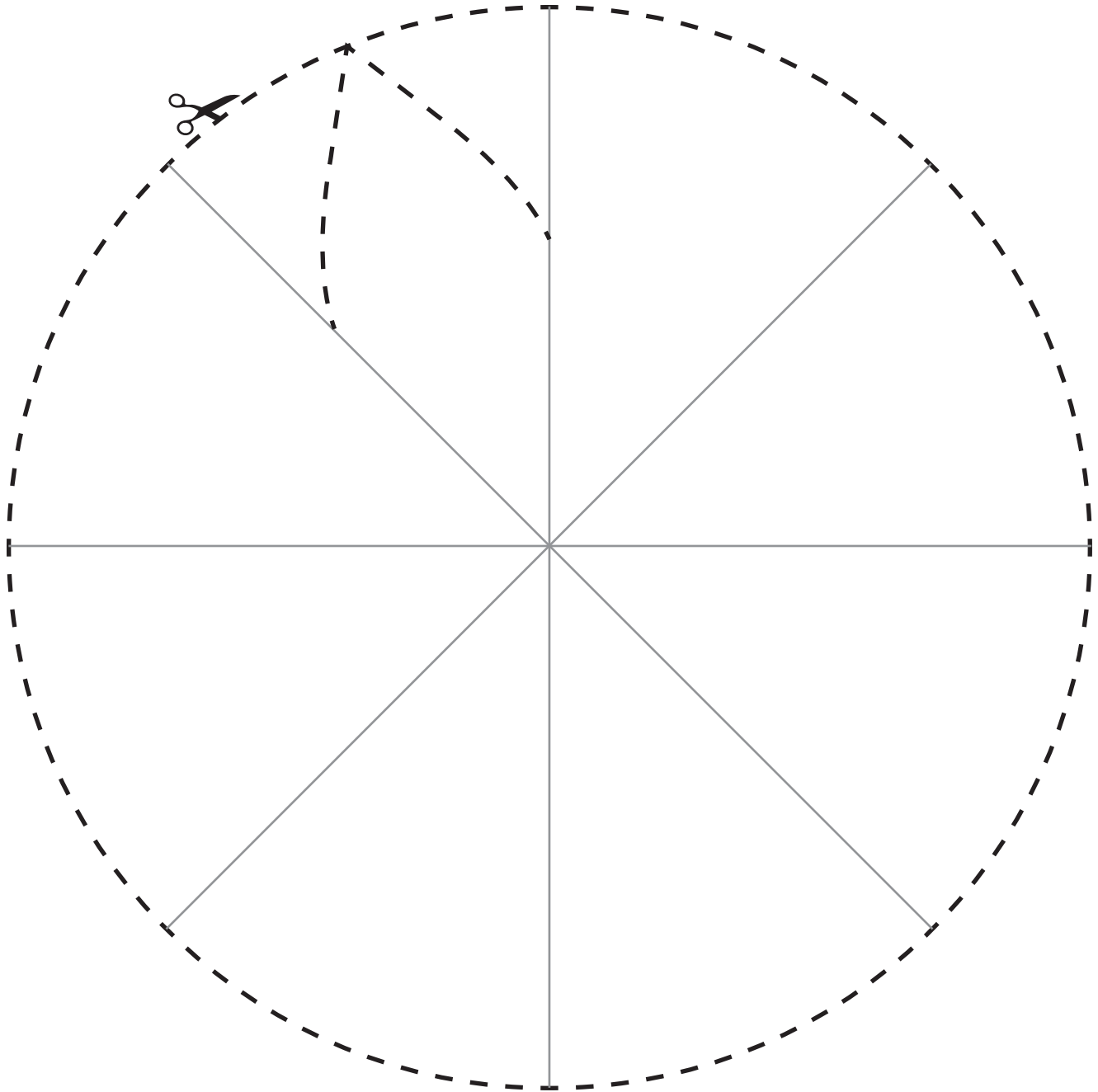
LM 2.7D Shapes



X



LM 2.7E Flower Template





Name _____

LM 2.9A Hundred Chart

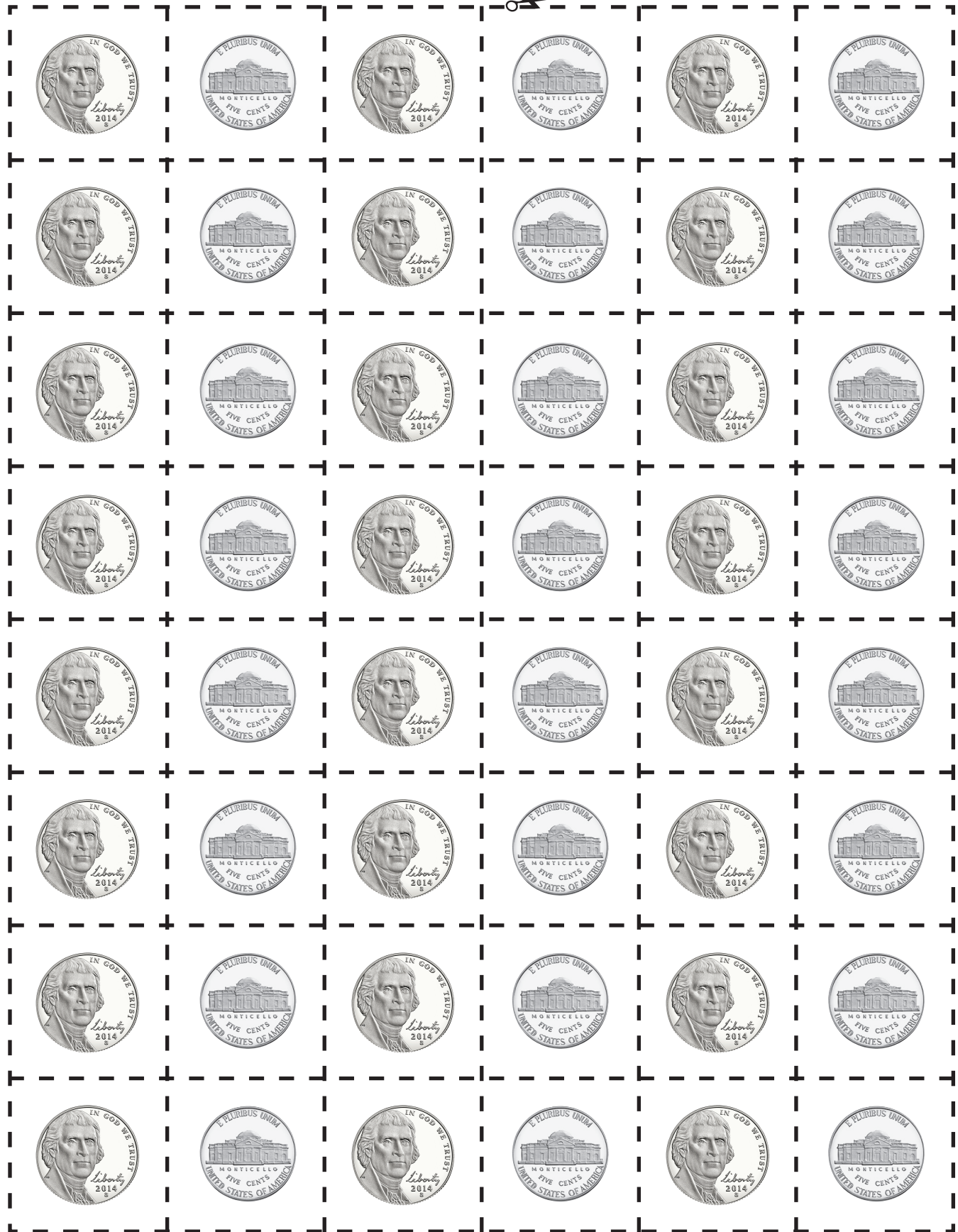
Hundred Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



Name _____

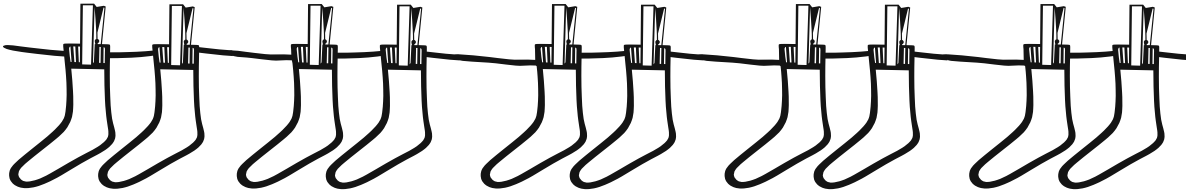
LM 2.10A Nickels



Name _____

LM 2.10B Skip Counting

1. Count by 2s. Color the second, fourth, sixth, eighth, and tenth socks.



How many socks? _____

2. Count by 5s. Color the fifth, tenth, fifteenth, and twentieth fingers.



How many fingers? _____

3. Count by 3s. Color the third, sixth, ninth, and twelfth hearts.



How many hearts? _____

4. Count by 4s. Color the fourth, eighth, twelfth, and sixteenth wheels.

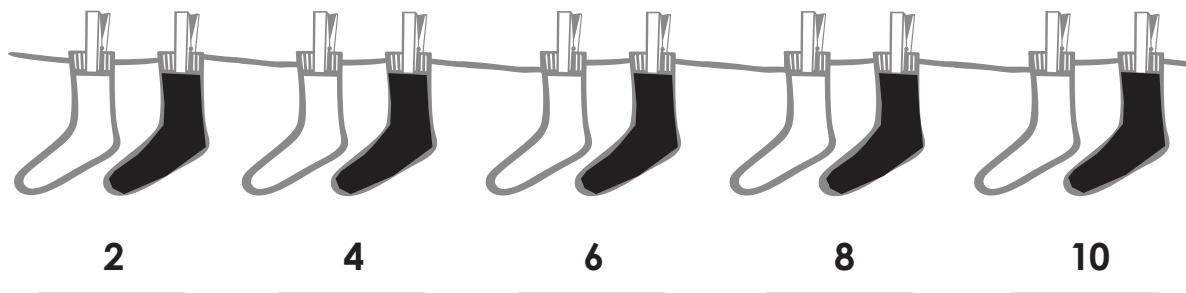


How many wheels are showing? _____



LM 2.10B Skip Counting

1. Count by 2s. Color the second, fourth, sixth, eighth, and tenth socks.



How many socks? 10

2. Count by 5s. Color the fifth, tenth, fifteenth, and twentieth fingers.



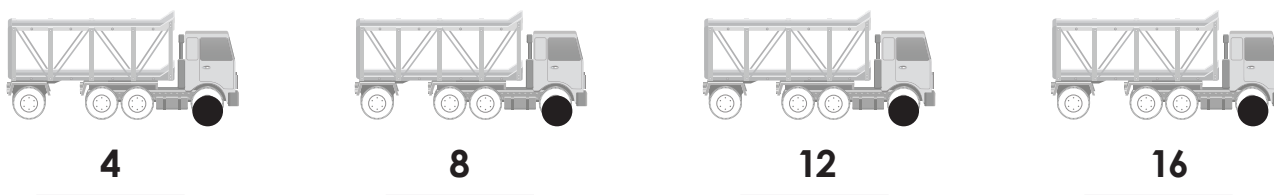
How many fingers? 20

3. Count by 3s. Color the third, sixth, ninth, and twelfth hearts.



How many hearts? 12

4. Count by 4s. Color the fourth, eighth, twelfth, and sixteenth wheels.



How many wheels are showing? 16



LM 2.13A Flash Cards: Ordinal Words



**Ordinal
Word
Flash Cards**

first

second

third



LM 2.13B Flash Cards: Ordinal Words

fifth

seventh

fourth

sixth



LM 2.13C Flash Cards: Ordinal Words



ninth

eighth

tenth



LM 2.13D Flash Cards: Ordinal Numerals

1st

3rd

Ordinal
Numeral
Flash Cards

2nd



5th

7th

4th

6th



LM 2.13F Flash Cards: Ordinal Numerals



9th

8th

10th

Name _____

LM 2.15A Chapter 2 Test

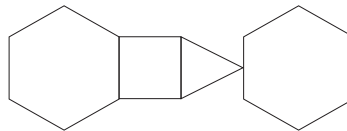
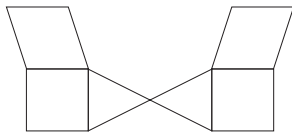
1. Draw a shape that has 3 sides.
2. Draw a circle inside an oval.
3. Draw a shape that has 6 sides.

4. Draw 3 different shapes that have 4 sides.

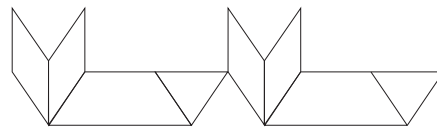
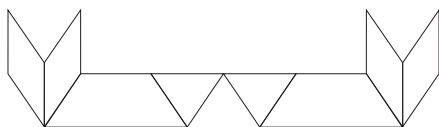
5. Draw a closed figure.

6. Draw an open figure.

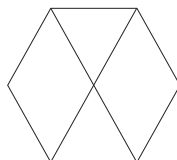
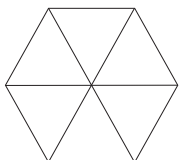
7. Circle the pattern that shows shape reflection.



8. Circle the pattern that shows shape translation.



9. Circle the pattern that shows shape rotation.

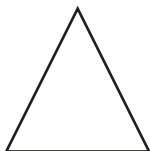




LM 2.15A Chapter 2 Test

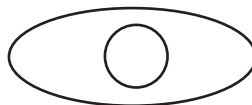
1. Draw a shape that has 3 sides.

Answers will vary.



2. Draw a circle inside an oval.

Answers will vary.



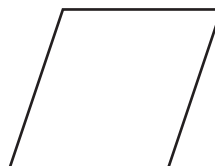
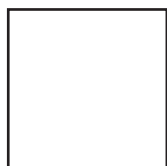
3. Draw a shape that has 6 sides.

Answers will vary.



4. Draw 3 different shapes that have 4 sides.

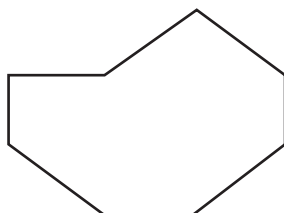
Possible answers:



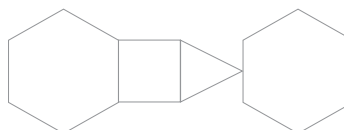
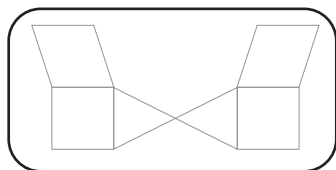
5. Draw a closed figure.

6. Draw an open figure.

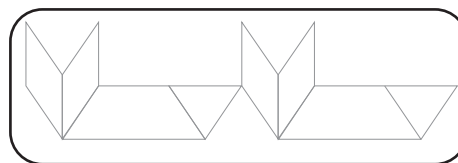
Drawings will vary.



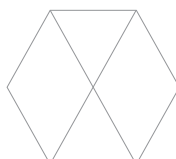
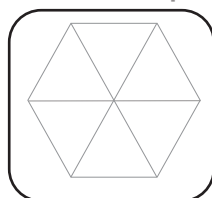
7. Circle the pattern that shows shape reflection.



8. Circle the pattern that shows shape translation.



9. Circle the pattern that shows shape rotation.



Name _____

LM 2.15B Chapter 2 Test

Count the money.

10.



¢

11.



¢

Circle the larger number.

12. 42 or 24

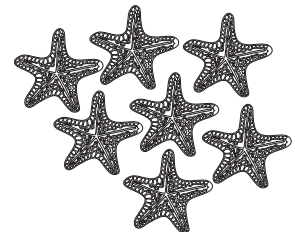
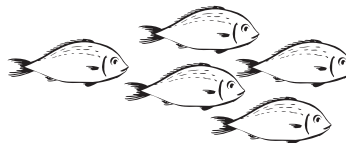
14. 55 or 46

13. 19 or 27

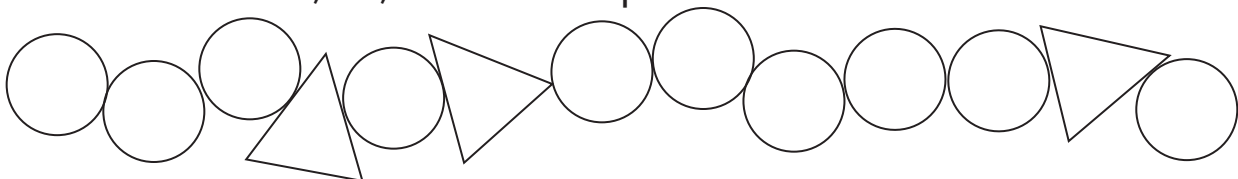
15. 82 or 40

16. Draw  to show 30 cents.

17. Circle the sets that are equal in number.



18. Cross out the 2nd, 6th, and 10th shapes.





LM 2.15B Chapter 2 Test

Count the money.

10.



25 ¢

11.



7 ¢

Circle the larger number.

12. **42** or 24

14. **55** or 46

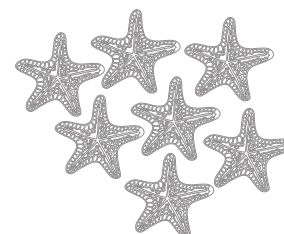
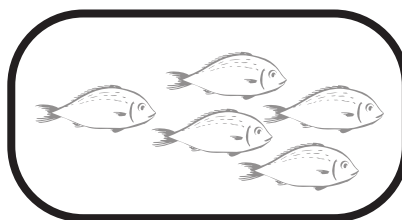
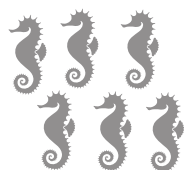
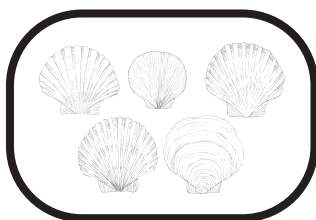
13. 19 or **27**

15. **82** or 40

16. Draw **10¢** to show 30 cents.



17. Circle the sets that are equal in number.



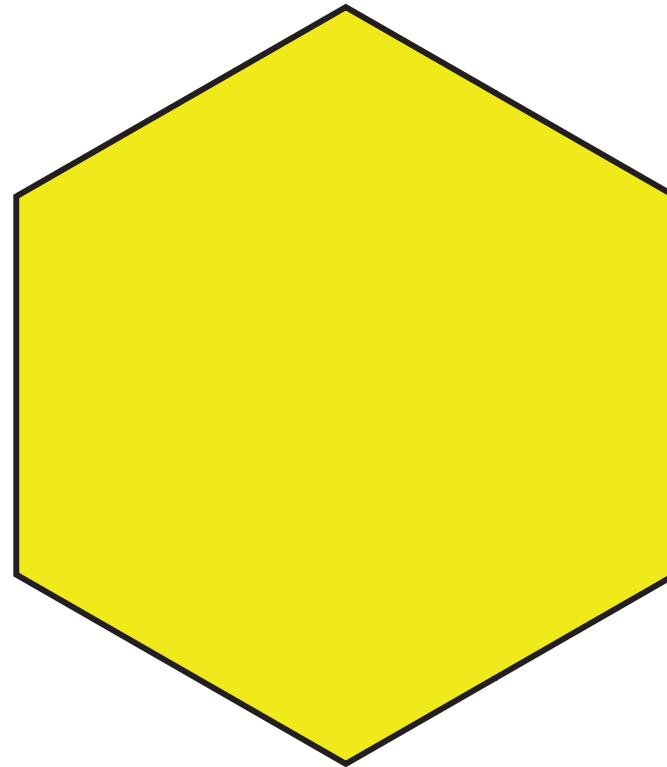
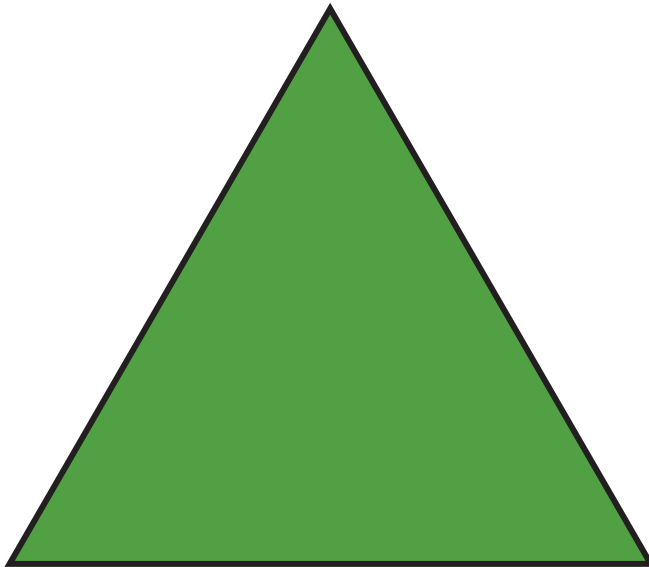
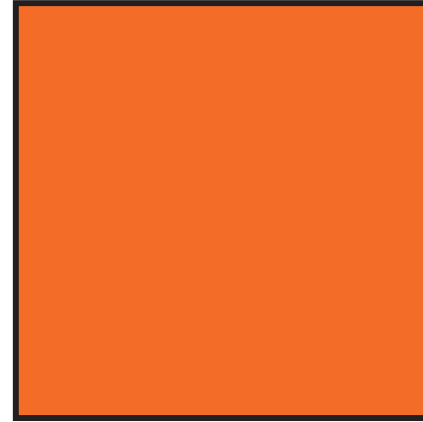
18. Cross out the 2nd, 6th, and 10th shapes.





DM 2.1A

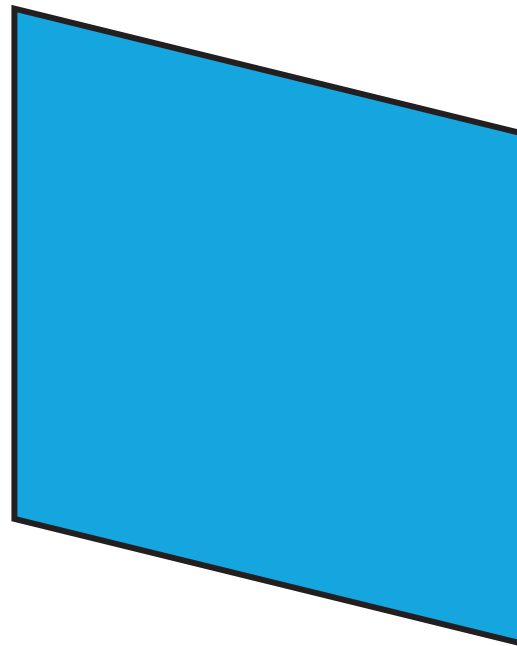
Rectangle, Square, Triangle, and Hexagon





DM 2.2A

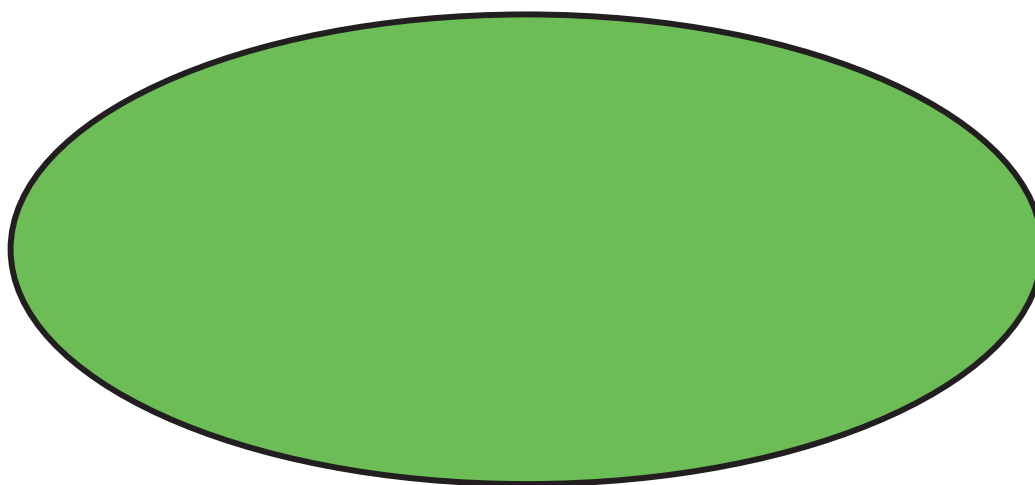
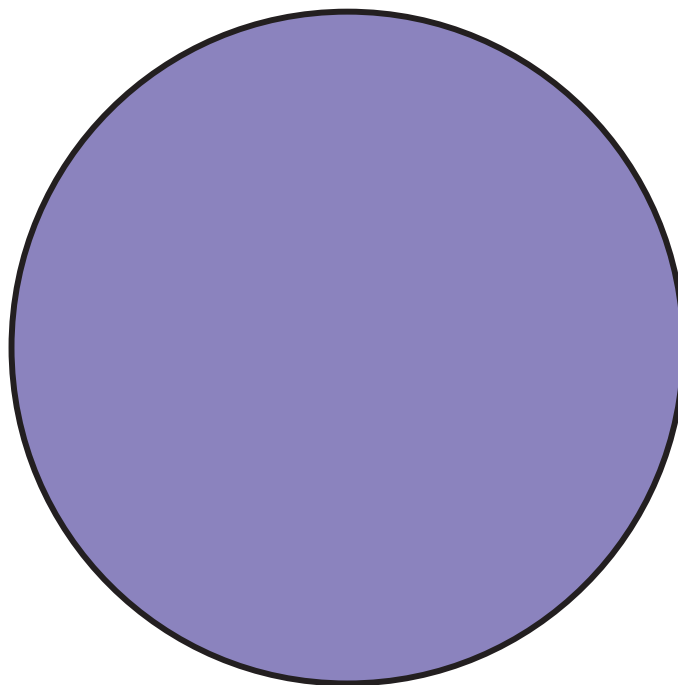
Trapezoid and Rhombus





DM 2.3A

Circle and Oval





Hundred Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100