# Lesson 29

Objective: Solidify the vocabulary of geometry.

Suggested Lesson Structure

■ Fluency Practice   (12 minutes)
■ Concept Development   (38 minutes)
■ Student Debrief   (10 minutes)
  Total Time   **(60 minutes)**

Fluency Practice (12 minutes)

▪ Sprint: Multiply Decimals **5.NBT.7**   (9 minutes)
▪ Multiply Mentally **5.NBT.5**   (3 minutes)

Sprint: Multiply Decimals (9 minutes)

Materials: (S) Multiply Decimals Sprint

Note: This fluency activity reviews G5–Module 4 concepts.

Multiply Mentally (3 minutes)

Materials: (S) Personal white boards

Note: This fluency activity drill helps bolster students' understanding of and automaticity with the distributive property of multiplication.

> T: (Write $7 \times 10 =$ ____.) Say the multiplication sentence.
> S: $7 \times 10 = 70$.
> T: (Write $7 \times 9 = 70 -$ ____ below $7 \times 10 = 70$.) On your personal boards, write the complete number sentence.
> S: (Write $7 \times 9 = 70 - 7$.)
> T: 7×9 is…?
> S: 63.

Repeat the process and procedure for 7×99, 15×9, and 31×99.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

To make the Multiply Mentally fluency activity directions clear to English language learners, give an example before asking students to respond. Differentiate for students working above grade level by challenging learners to respond without writing. Also, encourage them to analyze the strategy and present multiplication sentences that best suits it, such as using the distributive property to solve 7×99.

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Concept Development (38 minutes)

Materials: (S) Chart paper or personal white board,
scissors, Problem Set (copied on card stock),
Math Pictionary directions (shown below),
small envelope, 30-second timer

Today, students use the vocabulary terms of the Problem
Set to play Math Pictionary.

Part 1: Match terms to definitions.

Students begin by cutting out the vocabulary terms and
matching them to the intact card of definitions on the
Problem Set by placing the correct term on top of its
matching definition (pictured to the right). Let them
review terms with each other and argue until a consensus
is reached. Possibly review answers.

The definitions can then be collected and saved for use in
G5–M6–Lesson 30 (later to be stored in the summer

activity box).

Part 2: Play Pictionary.

Students can play using the rules in the directions to the
right. Demonstrating a round of the game as a whole
class, then moving to play in small groups may
maximize engagement.

Note on game directions: The first wrong guess from a
team passes play to the other team. The purpose of
this is two-fold. First of all, it encourages students to be

MP.6 as specific as possible when drawing to represent each
vocabulary term. Secondly, it discourages teams from
just running through a list of vocabulary words until
they say the correct word.

After the session, students can put the vocabulary
terms in a small envelope. The terms will be used in
G5–M6–Lesson 30 and will be stored in the summer
activity box. Each student should also receive a copy of
the game directions to put in his/her summer activity
box.

Math Pictionary:

Number of players: 4–8

Materials: Blank paper, timer, pencils

- Players divide into 2 teams. The vocabulary
  term cards are placed face down in a pile.
- A player from Team A chooses a card, silently
  reads the card, and draws a picture to
  represent the term on the card.
- As soon as the player reads the card, Team B
  starts the 30-second timer.
- Team A players use the drawing to figure out
  the term before the timer sounds.
- If the members of Team A correctly guess the
  term, they score a point for their team.
- However, the *first* wrong guess from Team A
  passes play to Team B. Team B then draws a
  picture to steal the point from Team A.
- Play continues with teams taking turns drawing
  until all cards have been used. The team with
  the most points wins.

Problem Set

Note: The Problem Set for G5–M6–Lesson 29 is the vocabulary definitions and terms.

Student Debrief (10 minutes)

Lesson Objective: Solidify the vocabulary of geometry.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.
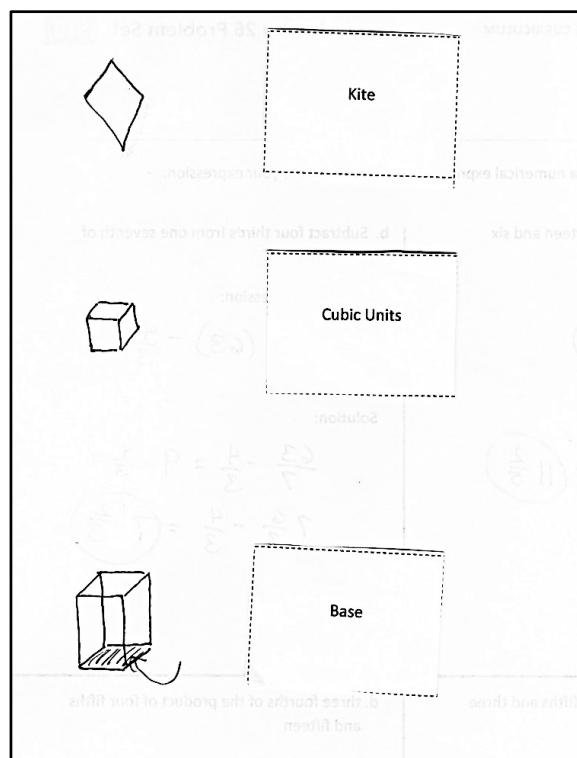
Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

You may choose to use any combination of the questions below to lead the discussion.

- Which picture or model was most difficult for you to draw? Why?
- How does drawing pictures and models help you understand and review these geometry terms?
- How can you use your pictorial vocabulary cards during the summer to review these geometry terms?
- Which terms go together? Why? (Students will have many ways of sorting these concepts.)

Reflection (3 minutes)

In G5–M6–Topic F, to close their elementary experience, the Exit Ticket is set aside and replaced by a brief opportunity to reflect on the mathematics done that day as it relates to their broader experience of math.

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A

 # Correct _____

Multiply.

1	3 x 2 =		23	0.6 x 2 =	
2	3 x 0.2 =		24	0.6 x 0.2 =	
3	3 x 0.02 =		25	0.6 x 0.02 =	
4	3 x 3 =		26	0.2 x 0.06 =	
5	3 x 0.3 =		27	5 x 7 =	
6	3 x 0.03 =		28	0.5 x 7 =	
7	2 x 4 =		29	0.5 x 0.7 =	
8	2 x 0.4 =		30	0.5 x 0.07 =	
9	2 x 0.04 =		31	0.7 x 0.05 =	
10	5 x 3 =		32	2 x 8 =	
11	5 x 0.3 =		33	9 x 0.2 =	
12	5 x 0.03 =		34	3 x 7 =	
13	7 x 2 =		35	8 x 0.03 =	
14	7 x 0.2 =		36	4 x 6 =	
15	7 x 0.02 =		37	0.6 x 7 =	
16	4 x 3 =		38	0.7 x 0.7 =	
17	4 x 0.3 =		39	0.8 x 0.06 =	
18	0.4 x 3 =		40	0.09 x 0.6 =	
19	0.4 x 0.3 =		41	6 x 0.8 =	
20	0.4 x 0.03 =		42	0.7 x 0.9 =	
21	0.3 x 0.04 =		43	0.08 x 0.8 =	
22	6 x 2 =		44	0.9 x 0.08 =	

B

Improvement _____   # Correct _____

Multiply.

1	4 x 2 =		23	0.8 x 2 =	
2	4 x 0.2 =		24	0.8 x 0.2 =	
3	4 x 0.02 =		25	0.8 x 0.02 =	
4	2 x 3 =		26	0.2 x 0.08 =	
5	2 x 0.3 =		27	5 x 9 =	
6	2 x 0.03 =		28	0.5 x 9 =	
7	3 x 3 =		29	0.5 x 0.9 =	
8	3 x 0.3 =		30	0.5 x 0.09 =	
9	3 x 0.03 =		31	0.9 x 0.05 =	
10	4 x 3 =		32	2 x 6 =	
11	4 x 0.3 =		33	7 x 0.2 =	
12	4 x 0.03 =		34	3 x 8 =	
13	9 x 2 =		35	9 x 0.03 =	
14	9 x 0.2 =		36	4 x 8 =	
15	9 x 0.02 =		37	0.7 x 6 =	
16	5 x 3 =		38	0.6 x 0.6 =	
17	5 x 0.3 =		39	0.6 x 0.08 =	
18	0.5 x 3 =		40	0.06 x 0.9 =	
19	0.5 x 0.3 =		41	8 x 0.6 =	
20	0.5 x 0.03 =		42	0.9 x 0.7 =	
21	0.3 x 0.05 =		43	0.07 x 0.7 =	
22	8 x 2 =		44	0.8 x 0.09 =	

A quadrilateral with two pairs of equal sides that are also adjacent.	An angle that turns through $\frac{1}{360}$ of a circle.	A quadrilateral with at least one pair of parallel lines.	A closed figure made up of line segments.
Measurement of space or capacity.	A quadrilateral with opposite sides that are parallel.	An angle measuring 90 degrees.	The union of two different rays sharing a common vertex.
The number of square units that covers a two-dimensional shape.	Two lines in a plane that do not intersect.	The number of adjacent layers of the base that form a rectangular prism.	A three-dimensional figure with six square sides.
A quadrilateral with four 90-degree angles.	A polygon with 4 sides and 4 angles.	A parallelogram with all equal sides.	Cubes of the same size used for measuring.
Two intersecting lines that form 90-degree angles.	A three-dimensional figure with six rectangular sides.	A three-dimensional figure.	Any flat surface of a 3-D figure.
A line that cuts a line segment into two equal parts at 90 degrees.	Squares of the same size, used for measuring.	A rectangular prism with only 90-degree angles.	One face of a 3-D solid, often thought of as the surface upon which the solid rests.

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Base	Volume of a Solid	Cubic Units	Kite
Height	One-Degree Angle	Face	Trapezoid
Right Rectangular Prism	Perpendicular Bisector	Cube	Area
Perpendicular Lines	Rhombus	Parallel Lines	Angle
Polygon	Rectangular Prism	Parallelogram	Rectangle
Right Angle	Quadrilateral	Solid Figure	Square Units
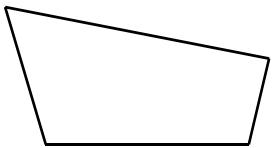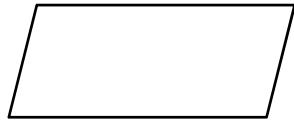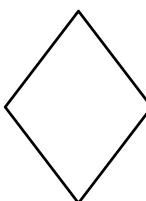
Name _____   Date _____

It is said that the true measure of knowing something is being able to teach it to someone else. Who can you teach these terms to this summer? How will you teach these terms to your summer student?

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Name _____   Date _____

1. Use your ruler, protractor, and set square to help you give as many names as possible for each figure
    below. Then, explain your reasoning for how you named each figure.

Figure	Names	Reasoning for Names
a.		
b.		
c.		
d.		

2. Mark draws a figure that has the following characteristics:

   ▪ Exactly 4 sides that are each 7 centimeters long
   ▪ Two sets of parallel lines
   ▪ Exactly 4 angles that measure 35 degrees, 145 degrees, 35 degrees, and 145 degrees

   a. Draw and label Mark's figure below.

   b. Give as many names of quadrilaterals as possible for Mark's figure. Explain your reasoning for the names of Mark's figure.

   c. List the names of Mark's figure in Problem 2(b) in order from least specific to most specific. Explain your thinking.

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