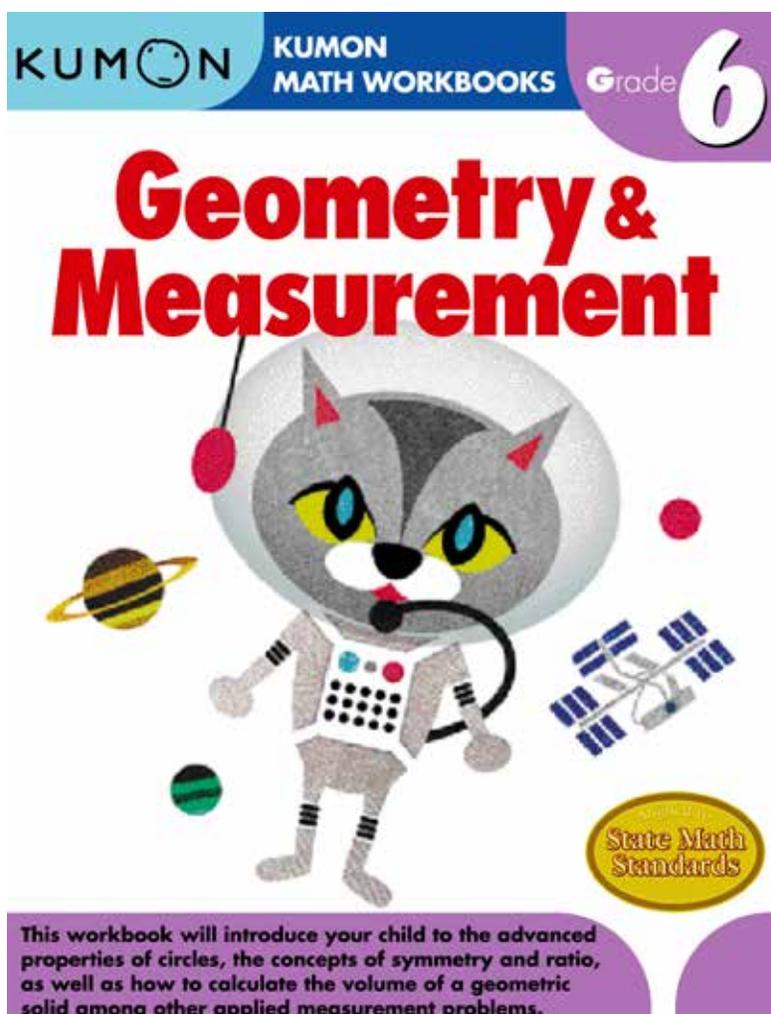


Kumon *Grade 6 Geometry & Measurement* Workbook Educator's Guide

Using Kumon Calculations Workbooks: General Guidance 2
Daily Guide: *Grade 6 Geometry & Measurement* 4



Using Kumon Calculations Workbooks: General Guidance

Kumon Calculations Workbooks follow the Kumon Method, a proven learning system from Japan that has helped millions of children worldwide develop math skills without frustration.

You can use Kumon Calculations Workbooks to **introduce new math skills** or to **provide additional support** after/alongside another program. The table below shows benefits of each approach.

Using Kumon Workbooks to teach a new skill	Using Kumon Workbooks for additional support
<ul style="list-style-type: none">• Learn the new concept(s) using an efficient and targeted approach• Avoid development of misconceptions• Progress toward mastery of the relevant math facts and procedures• Improve your child's mental calculation abilities and their ability to learn independently	<ul style="list-style-type: none">• Refine and deepen understanding of the concept(s)• Solidify mastery of math facts and gain procedural fluency• Identify and correct misconceptions• Improve your child's mental calculation abilities and their ability to learn independently

Please note that **for the full benefit of the Kumon Method**, including personalized learning plans and individualized instruction, take the next step and contact a Kumon Learning Center near you. Visit www.kumon.com for more information about our Learning Centers.

Important Steps

For all Kumon Calculations Workbooks, please use the following steps for best results.

Timing
<ul style="list-style-type: none">• We recommend having your child complete about one section (2 pages) a day. This should include the answer check.• Each daily session is about 15 to 30 minutes. If your child is learning the skill for the first time, the learning session will be closer to 30 minutes.
Sequencing
<ul style="list-style-type: none">• Even if your child is reviewing material, have them start on page 1 and work through the book page by page. Similarly, they should always work problems on each page in order. For best results, do not skip any content. <p>Kumon Workbooks are designed so the student “learns through doing”; therefore, the sequence of pages and</p>

problems in each book is key to the instructional method and effectiveness.

Checking Answers and Moving On

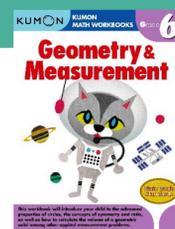
- Checking and correcting answers is an essential part of the learning process. One approach is to have a parent or teacher mark the child's answers as either correct or incorrect. Then have the child correct the wrong answers.
- You may choose to require a perfect score before your child moves on the next section. If you use this approach, you can repeat each section as many times as you wish by erasing it and having your child redo it. Or, have your child write answers on a separate sheet.

Encourage Self-Learning

- One hallmark of the Kumon Method is the emphasis on learning through doing rather than passive absorption of information. This is why there is minimal direct explanation in the book; the understanding comes through working problems in sequence.
- Support your child in the self-learning process by allowing them to work independently on the problems, correct their answers, and reflect on their errors. We encourage you to ask questions to promote deeper engagement, but resist the urge to "just explain" what they should learn from the page.

For a daily plan and page-by-page guidance to support using Kumon *Grade 6 Geometry & Measurement*, see the next page.

KUMON Grade 6 Geometry & Measurement Workbook: Daily Guide



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Using this guide

- This guide organizes the workbook into daily sessions of 2 pages each.
- Each daily session should last about 15 to 30 minutes.
- Fill in the Date column to keep track of your progress.

Date	Book Section	PP.	Description	Educator Notes
TOPIC: Review				
	1	2–3	• Review mixed topics	Have your child work slowly and carefully to avoid errors. These activities are a review. If your child finds the activities difficult, they may need to return to an easier book before moving on. Consider having them review <i>Grade 5 Geometry & Measurement</i> .
	2	4–5	• Review mixed topics	
TOPIC: Multiples and Factors				
	3	6–7	• Least Common Multiple	After your child completes #2, ask them if they see numbers that are multiples of more than one number. What do they notice? Guide them to see that the even numbers all have even multiples, and 5 has both odd and even multiples.
	4	8–9	• Least Common Multiple	When your child gets to #4, make sure they only write numbers that are multiples of both 4 and 6. They can refer to #1 and #2. Tell them that these are common multiples because 4 and 6 have these multiples in common. To solve #6, guide your child to see that they can choose every other multiple of 4.
	5	10–11	• Greatest Common Factor	Have your child practice reading their answers out loud in a complete sentence. This will help them feel more comfortable using terms like factors and multiples.
	6	12–13	• LCM & GCF	In previous activities, your child found the LCM by listing out multiples and finding the common multiple. Here they will learn to use GCF to find the LCM. See if they are able to work out the connection between the two in the first few problems, where the numbers are low enough that they can solve by listing out multiples. If they need support, use the boxed feature on p. 12.
	7	14–15	• Prime Numbers	After completing number one, ask your child what they notice. They may notice that all prime numbers are odd, and that prime numbers become more rare as you count up.
TOPIC: Fractions				
	8	16–17	• Fractions	Page 16 has students convert fractions intuitively, using shaded shapes. On page 17, they will begin reducing fractions, with the denominator provided. If they need more support grasping the concept, consider using manipulatives that they can handle themselves. You can cut out shapes and practice dividing them into halves and then fourths for instance.
	9	18–19	• Fractions	This activity pushes students to reduce fractions without telling them what to divide by. They will need to find the GCF of the numerator and denominator and then divide. If needed, take a piece of scrap paper and model out an example for them.
	10	20–21	• Fractions	Explain to your child that they need to find a common denominator in order to add or subtract fractions. They can find the least common denominator by finding the least common multiple of the two denominators.
	11	22–23	• Fractions	This activity has students converting fractions and reducing fractions. If they struggle with this activity, have them review the earlier activities until they are ready to move on.
TOPIC: Circles				
	12	24–25	• Circles	If your child does not have a compass to complete #2, draw a 45 degree angle, 90 degree angle and 180 degree angle and allow them to estimate.
	13	26–27	• Circles	
	14	28–29	• Circles	
	15	30–31	• Circles & Sectors	
	16	32–33	• Circles & Sectors	
TOPIC: Rectangular Prisms				

Date	Book Section	PP.	Description	Educator Notes
	17	34–35	• Rectangular Prisms	Support your child's learning by using models. For identifying vertices and edges, you can use any household object that is a rectangular prism, such as a cereal box or shoebox. When drawing plans, it may be helpful to have them cut out graph paper.
	18	36–37	• Rectangular Prisms	
	19	38–39	• Rectangular Prisms	
	20	40–41	• Rectangular Prisms	
TOPIC: Solids				
	21	42–43	• Solids	Again, students may benefit from constructing the solids in order to understand how the parts fit together.
	22	44–45	• Solids	
	23	46–47	• Solids	
TOPIC: Surface Area and Volume				
	24	48–49	• Surface Area & Volume	This section asks students to put together all of their knowledge from previous sections. If they are struggling, help them break the problem down in to its parts. Then allow them to review sections as needed before moving on.
	25	50–51	• Surface Area & Volume	
	26	52–53	• Surface Area & Volume	
	27	54–55	• Surface Area & Volume	
TOPIC: Scale Drawing				
	28	56–57	• Scale Drawing	It is recommended that students practice drawing these shapes on some scrap graph paper.
	29	58–59	• Scale Drawing	
	30	60–61	• Scale Drawing	
	31	62–63	• Scale Drawing	
TOPIC: Ratio				
	32	64–65	• Ratio	You can extend these activities by asking your child to circle the larger number in the ratio, or by asking them to write the ratio the other way around (B:A instead of A:B).
	33	66–67	• Ratio	Point out that ratios can be similar to fractions, and like fractions they can be reduced (when relevant).
	34	68–69	• Ratio	
TOPIC: Review				
	35	70–71	• Review	If your child struggles with any of these problems, have them review the relevant section.
	36	72–73	• Review	