



Math Grade 8 Gen

Distance Learning

Reveal

Supporting continuity of learning during Distance instruction.

MINISTRY OF EDUCATION



Purpose and Core Principles

Purpose:

- Provide guidance for teachers to support Distance Learning over the next four weeks.
- Ensure learning continuity aligned with Comprehensive Curriculum Guides (CCGs).
- Supporting growth-appropriate teaching for students in mathematics.
- Provide a clear structure for online lesson planning and weekly learning.

Core Principles:

- Keep lessons short, interactive, and engaging.
- Focus on core learning outcomes.
- Balance live education with hands-on activities at home.
- Encourage sharing, navigation, and discussion.
- Maintain a routine that supports student well-being and continuity of learning.

Structure of an Online Lesson

Weekly Instruction Structure

Subject	Cycle	Grade	Stream	Number of Periods
Mathematics	2	8	General	5

Planning Considerations

When planning the week, teachers should ensure that learning includes opportunities for:

- **Conceptual understanding through visual models and representations.**
- **Problem-solving tasks.**
- **Exploration of different strategies.**
- **Short collaborative activities or think–pair–share discussions** to compare solution strategies.
- **Students sharing their mathematical reasoning or solutions with the class.**
- **Class discussion and reflection** on patterns, relationships, and efficient strategies.
- **Integration of values such as perseverance, cooperation, and responsibility during mathematical discussions.**

These elements help maintain engagement and support deeper mathematical understanding during the learning process.

Teaching and Learning Delivery Model

Learning should include a balance of live interaction, independent practice, and hands-on activities.

Live Instruction

- Short live lessons with the teacher.
- Explanation of new concepts.
- Questions and discussion.
- Check for understanding.

Independent Learning

- Reading and practice activities.
- Digital tasks.
- Watching recorded explanations.
- Reflection or short recorded responses.

Balanced Distance Learning

Note: The delivery approach recommended by the Curriculum Team for each lesson, whether **live**, **independent**, or **offline/hands-on**, is intended solely to guide implementation and does not imply that the lesson is excluded from assessment.

Offline and Hands-On Learning

- Creative tasks and projects.
- Drawing, writing, or building models.
- Physical activity or real-life exploration.

Preparing for online learning

The first week should focus on helping students become comfortable with online learning before introducing new academic content.

Focus

- Helping students become familiar with the online platform.
- Establishing simple routines and expectations.
- Practicing how students participate during online lessons.
- Building confidence speaking and interacting online.
- Creating a positive and supportive classroom environment.

Suggested Activities

- Attendance procedures.
- Virtual Think-Pair-Share.
- Multi-Modal Modeling.
- Error Analysis & Critique.
- Virtual Gallery Walks.

Teacher Guidance

Keep activities short, interactive, and enjoyable.

The goal of this week is to build routines and engagement, so students are ready for structured learning in the following weeks.

Monitoring Learning and Providing Feedback

In Distance Learning for **cycle two** students, teachers monitor learning through **interaction, observation, and simple evidence of participation**, rather than relying only on written assignments.

Approach	What Teachers Look For	Example	Providing Feedback
Observation during live sessions	Students' attention, engagement, and willingness to explain how fractions relate to division and how models represent the operation.	Student explains that $3 \div 4$ can be written as $\frac{3}{4}$ or shows a fraction bar model representing division of wholes into fractional parts.	Immediate verbal feedback and modelling. "Good reasoning. I like how you connected division with fractions. Can you show it using a number line or fraction model?"
Observation during live sessions	Students demonstrate understanding of division involving unit fractions or whole numbers through quick questions or visual reasoning.	"How many $\frac{1}{4}$ pieces are in 2 wholes?" or "What is $4 \div \frac{1}{2}$?" Students respond using fraction bars, drawings, or mental reasoning.	Acknowledge correct responses and guide thinking if needed. "Yes, there are 8 quarters in 2. Let's show it using a model to explain why."
Observation during live sessions	Evidence of understanding through drawings, fraction bars, number lines, or area models representing fraction division.	Student shows a drawing representing $3 \div \frac{1}{4}$, illustrating how many quarter pieces fit into 3 wholes.	Positive reinforcement and extension questions. "Tell us how your model shows the answer. How would the model change for $3 \div \frac{1}{3}$?"
Observation during live sessions	Parents briefly support learning by observing or sharing evidence of the child solving fraction division problems at home.	Parent uploads a photo of the child using paper strips or drawings to represent division by fractions .	Short teacher response or encouragement. "Great work showing the fraction model. Next time try explaining the solution using an equation as well."

Grade 8 (Reveal)

Term 3 Overview of Learning

Unit Number	Unit Name	Week	Number of Periods per Lesson	Lesson Number	Lesson Name	Learning Outcomes	Delivery Model
M8	Transformations	1	2	M8L1	Translations	Translate figures on the coordinate plane and use coordinate notation to describe translations.	Live Instruction
			3	M8L2	Reflections	Describe reflections of figures on the coordinate plane using coordinates and coordinate notation.	Live Instruction
		2	2	M8L3	Rotations	Use coordinate notation to find the coordinates of a figure that has been rotated about the origin, as well as describe the angle of rotation using the given graph and coordinates of the figures.	Live Instruction
			3	M8L4	Dilations	Describe dilations using coordinate notation as well as graph dilations on the coordinate plane using coordinate notation.	Live Instruction

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Term 3 Overview of Learning

Unit Number	Unit Name	Week	Number of Periods per Lesson	Lesson Number	Lesson Name	Learning Outcomes	Delivery Model
M9	Congruence and Similarity	3	4	M9L1	Congruence and Transformations	Use a composition of transformations, as well as the orientation of figures, to determine if two figures are congruent.	Live Instruction
			1	M9L2	Congruence and Corresponding Parts	Use the properties of rotations, reflections, and translations to identify congruent parts of congruent figures and to find missing measures.	Live Instruction
		4	1				
			4	M9L3	Similarity and Transformations	Determine if two figures are similar by determining a sequence of rotations, reflections, translations, and dilations that maps one similar figure onto another.	Live Instruction
		5	3	M9L4	Similarity and Corresponding Parts	Use properties of similar figures to determine similarity and to find missing measures.	Live Instruction
			2	M9L5	Indirect Measurement	Use properties of similar triangles to solve indirect measurement problems.	Live Instruction

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Term 3 Overview of Learning

Unit Number	Unit Name	Week	Number of Periods per Lesson	Lesson Number	Lesson Name	Learning Outcomes	Delivery Model
M10	Volume	6	2	M10L1	Volume of Cylinders	Use the formula for the volume of a cylinder to find the volume of a cylinder given its diameter or radius and the height.	Live Instruction
			3	M10L2	Volume of Cones	Use the formula for the volume of a cone to find the volume of a cone given its diameter or radius and the height.	Live Instruction
		7	4	M10L3	Volume of Spheres	Use the formula for the volume of a sphere or hemisphere to find the volume of the figure given its radius or diameter.	Live Instruction
			-	M10L4	Find Missing Dimensions	Use volume formulas to solve for missing dimensions in cones, cylinders, and spheres.	Independent Learning
			1	M10L5	Volume of Composite Solids	Find the volume of a composite figure by decomposing it into cubes, cones, cylinders, and spheres, and using the known volume formulas for these figures.	Live Instruction
		8	2				

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Term 3 Overview of Learning

Unit Number	Unit Name	Week	Number of Periods per Lesson	Lesson Number	Lesson Name	Learning Outcomes	Delivery Model
M11	Scatter Plots and Two-Way Tables	8	3	M11L1	Scatter Plots	Use a set of bivariate data to construct a scatter plot and describe the association as positive or negative and as linear or nonlinear.	Live Instruction
		9	1				
			4	M11L2	Draw Lines of Fit	Use a scatter plot to draw a line that closely fits the data and predict values that are not present in the original data set.	Live Instruction
		10	4	M11L3	Equations for Lines of Fit	Find the equation for a line that closely fits the data and use it to predict values that are not present in the original data set.	Live Instruction
			1	M11L4	Two-Way Tables	Construct and interpret a two-way table using relative frequencies.	Live Instruction
		11	2				
			3	M11L5	Associations in Two-Way Tables	Use relative frequencies to determine if an association exists between categories in a two-way table.	Live Instruction

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Distance Lesson Plan Exemplar

Grade	5	Curriculum	Reveal	Term	3	Unit name	Divide Fractions	Lesson name	Relate Fractions to Division
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1. Learning Outcomes

- I can represent the quotient of a division equation as a fraction or mixed number.
- I can explain why the quotient of a division equation can always be expressed as a fraction.
- I can explain why division of whole numbers can be written as a multiplication expression.

2. Introduction

1. Number Routine: Is the value of the expression greater than, or less than $\frac{1}{2}$? How do you know?
A. $\frac{4}{8} + \frac{3}{10}$ B. $\frac{1}{4} + \frac{1}{5}$
2. The teacher presents a simple sharing situation and asks students how division can describe the situation. The teacher then guides students to notice that division can also be written as a fraction and explains that today they will explore how fractions and division are connected.

Vocabulary

- Denominator
- Dividend
- Divisor
- Numerator
- Quotient

3. Explore

- The teacher presents the scenario: "A farmer pours 5 gallons of water equally into 4 buckets." The teacher asks students how they can determine how much water will be in each bucket and encourages them to represent the situation with a drawing, model, or equation.
- The teacher asks guiding questions such as: "What operation helps us share equally?" and "How can we show this division as a fraction?" while recording different student strategies on the board.
- **Students** work in pairs to model the situation using drawings or fraction strips, showing how 5 gallons can be shared equally among 4 buckets.
- **Students** explain their thinking by connecting the division expression $5 \div 4$ to the fraction $\frac{5}{4}$ and discuss how the quotient can also be written as the mixed number $1\frac{1}{4}$.

4. Practice & Independent Work

- The teacher assigns independent practice through Reveal Math "On My Own" problems, a short worksheet from Reveal Math, or ALEKS Platform, asking students to solve division situations and write the quotient as a fraction or mixed number.
- The teacher monitors students' progress in real time through the digital platform, reviews student responses, provides written or verbal feedback, and highlights common errors during the session.
- **Students** work independently online to solve the assigned problems, writing division expressions as fractions or mixed numbers and showing their steps as per to the questions.
- **Students** submit their work digitally and share or explain one solution in the chat or discussion board, comparing strategies with classmates and reflecting on how division can be represented as a fraction.

Common Misconceptions

1. Students may initially be confused as the amount they are dividing is less than the amount they are dividing by. Remind them that they can still write a division equation or fraction that is equal to a number less than 1.

5. Suggested resources

- [I know it](#)
- [Khan Academy](#)
- [IXL](#)

6. Conclusion & Exit Ticket

- The teacher summarizes the key idea that division can be written as a fraction and reviews one or two examples with the class. The teacher then assigns a short digital Exit Ticket through the Reveal Math Platform.
- **Students** complete the Exit Ticket independently online, solving problems that connect division expressions to fractions and simple word problems.
- Students submit their responses digitally and complete a short self-reflection (confidence check) about their understanding of how division can be represented as a fraction.