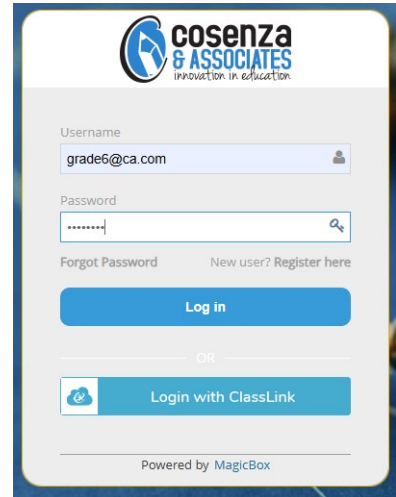
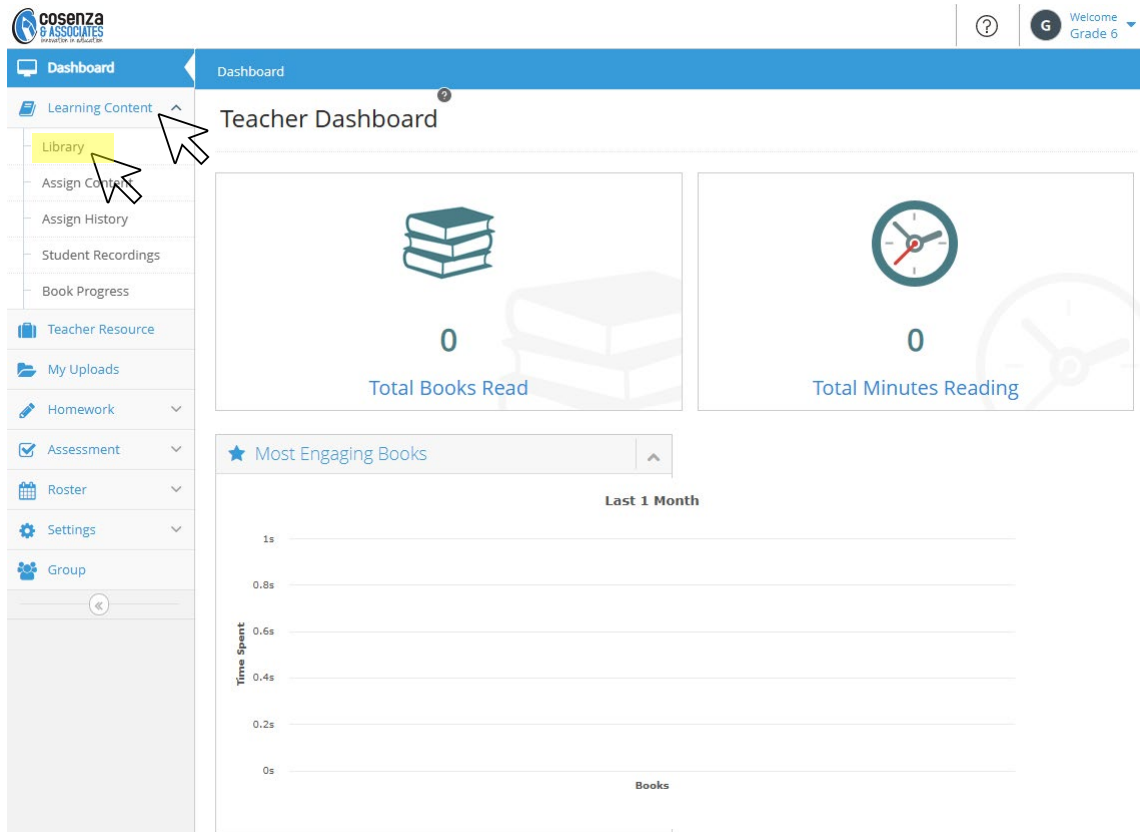


# Navigating Cosenza & Associates Mathematics Materials

**Step 1:** Log in using the credentials provided for the grade level or course of your choice.



**Step 2:** After landing on the Teacher Dashboard, click the Learning Content panel in the left-hand Navigation Panel. Click **Library** to view the content.



**Step 3: View the Content Library. Each icon contains the resources for that grade level or course.**

**Library**

Search by Title, Author, ISBN or Description

Item ID	Course Type	Description
001 Math-Grade 8 IMRA24	Student Course	Student Course contains the content organized by Unit-Lesson structure.
001 Math-Grade 8 IMRA24	Teacher Course	Teacher Course contains the content organized by Unit-Lesson structure with teacher instructional supports.
003 Grade 8 TEKS Companion Guide Student Edition IMRA	Student Edition	TEKS Companion Guide (TCG) contains all of the lessons from the Explanation phase of each lesson in ePub form. These are broken into individual lessons and placed in the appropriate Unit/Lesson in the Teacher and Student courses.
003 Grade 8 TEKS Companion Guide Teacher Manual IMRA	Teacher Manual	TCG Teacher Manual contains advice for use of TCG and answers from TCG practice questions.

**Library**


Search by Title, Author, ISBN or Description

Item ID	Course Type	Description
001 Algebraic Reasoning Student 2024	Student Edition	Student Edition of the Algebraic Reasoning textbook in ePub format.
002 Algebraic Reasoning TWE 2024	Teacher Wraparound Edition	Teacher Wraparound Edition of the Algebraic Reasoning textbook in ePub format.
003 August 2024 Algebraic Reasoning (Student Course)	Student Course	Student Course contains the content organized by Unit-Lesson structure.
003 August 2024 Algebraic Reasoning (Teacher Course)	Teacher Course	Teacher Course contains the content organized by Unit-Lesson structure with teacher instructional supports.
004 Algebra 1 TEKS Companion Guide Student Edition IMRA	Student Edition	TCG Teacher Manual contains advice for use of TCG and answers from TCG practice questions. Algebraic Reasoning contains the Algebra 1 TCG to support reinforcing students' prior learning from Algebra 1.
005 Algebra 1 TEKS Companion Guide Teacher Manual	Teacher Manual	TCG Teacher Manual contains advice for use of TCG and answers from TCG practice questions. Algebraic Reasoning contains the Algebra 1 TCG to support reinforcing students' prior learning from Algebra 1.

**Step 4:** Click on the Teacher Course icon. The left-hand navigation panel contains the Unit-Lesson structures. The main panel contains information based on which tile in the navigation panel has been selected. The course opens with the **Course Level Documents**, including

- TEKS and ELPS citations
- Year at a Glance
- Prior Learning Guide
- Pacing Guide
- Teacher’s Guide
- Implementation Guide
- Assessment Guide
- Problem-Solving Support

In the Course Level Documents, view the resources by clicking the name of the document. These documents are PDFs that will open in a new tab or window, based on your web browser settings.

**Grade 6 Teacher Materials** 

Math-Grade 6 by Cosenza & Associates is a full, Tier 1 curriculum resource. We address 100% of the TEKS and required ELPS for Grade 6 Mathematics. Please see the Year at a Glance for preliminary evidence of TEKS coverage.


Use the Citations document to directly link to the ELPS and TEKS breakouts. You will need to be logged in to the appropriate resource to review them.


[Grade 6 ELPS citations.pdf](#)


[Grade 6 TEKS citations.pdf](#)

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### Course Resources

 [Grade 6 Mathematics Year at a Glance](#)

 [Grade 6 Prior Learning Guide](#)

 [Grade 6 Mathematics Scope and Sequence.pdf](#)

The scope and sequence document provides information concerning alignment to the Texas Essential Knowledge and Skills (TEKS) for grade 6 mathematics and the English Language Proficiency Standards (ELPS) along with a rationale for the order of units of instruction, including the knowledge and concepts to be learned during the course.

[Grade 6 Mathematics Pacing Guide Revised 20240809.pdf](#)

The pacing guide contains calendars with unit and lesson level progression for 165-, 180-, and 210-instructional day calendars as well as suggestions for scope changes to accommodate shortened semesters and testing schedules without interrupting the flow of necessary learning in the course.

[Grade 6 Mathematics Teacher's Guide Revised 20240801.pdf](#)

Teachers can use this guide to become familiar with the course, the recommended use for all provided materials, protocols to internalize units and lessons, guiding principles for supporting all students, including using provided assessments with guidance for interpreting student performance including common misconceptions in the course and a guide for providing feedback to students.

**Step 5:** Click the Unit 1 tile in the navigation panel.

Grade 6 Course Level Documents

# Unit 1 Teacher Materials

**Unit 1: Decimals, Fractions, and Percents**

Lesson	TEKS	ELPS
Lesson 1: Representing Ratios and Percents	6.4E	1.A
Lesson 2: Benchmark Fractions and Percents	6.4F	2.C
Lesson 3: Equivalent Parts of the Same Whole	6.4G, 6.5C	2.D, 3.E
Lesson 4: Equivalent Fractions, Decimals, and Percents	6.4G	3.H
Lesson 5: Percents in the Real World	6.5B	1.F, 4.D
Unit 1 Test	6.4E, 6.4F, 6.4G, 6.5B, 6.5C	

## Unit Introduction

In this unit, students extend their understanding of rational numbers to include the concept of a percent as a ratio where the whole is 100 parts. Students also flexibly generate equivalent forms of rational numbers for percents, fractions, and decimals. In doing so, students will use benchmark fractions and visual representations to represent equivalent parts of the same whole.

## Unit Overview

In 4th grade, students learned how to flexibly convert between fractions and decimals. Students also used equivalent fractions to solve problems and in 5th grade use equivalent fractions to add and subtract fractions with different denominators.

Math-Grade 6 Unit 1 introduces students to percents and how to represent those with concrete models, fractions, and decimals. Students utilize benchmark fractions and percents as a tool to build on their prior learning experiences with fractions and decimals to generate equivalent forms of rational numbers (fractions, decimals, and percents). Students then use these ideas to solve meaningful real-world problems involving multiple representations of rational numbers in a variety of contexts, including money. Students also solve real-world problems involving percents, including finding the whole, part, or percent when given the other two pieces.

In Unit 3, students will compare and order multiple forms of rational numbers and may need to convert between forms (e.g., convert a fraction to a decimal or a percent to a decimal) in order to do so. As students progress through 6th grade and into 7th grade, they are

The Unit tile opens the Unit Overview page which contains:

- Lessons and their associated TEKS and ELPS
- Unit Introduction
- Unit Overview
- Prior Learning Supports for the content students will learn in that unit
- Additional resources including:
  - Unit Document containing TEKS and ELPS, potential pacing, potential calendars, resources, and vocabulary terms
  - Parent letters in English and Spanish

**Step 6:** Click on the Unit 1 Lesson 1 tile. The lesson components will expand. Middle school lessons have three components: Exploration, Explanation, and Performance Task. *Algebraic Reasoning* lessons have sections of the textbook that correspond with that lesson, and each of the 5E's: Engage, Explore, Explain, Elaborate, and Evaluate.

**Unit 1, Lesson 1: Representing Ratios and Percents**

### Lesson Overview

**Focusing Questions:** What is a ratio? What is a percent? How can I represent a ratio or a percent using a concrete model, fractions, or decimals?

### Learning Outcomes

- I can represent a ratio using a concrete model, fraction, or decimal.
- I can represent a percent using a concrete model, fraction, or decimal.

### Texas Essential Knowledge and Skills (TEKS)

**6.4E Proportionality.** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to represent ratios and percents with concrete models, fractions, and decimals.

**6.1E Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to create and use representations to organize, record, and communicate mathematical ideas.

### English Language Proficiency Standards (ELPS)

**1.A Cross-curricular second language acquisition/speaking.** The ELL uses language learning strategies to develop an awareness of his or her own learning processes in all content areas. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to use prior knowledge and experiences to understand meanings in English.

### Overview of Process Standard(s)

In this lesson, students will create and use representations to organize, record, and communicate mathematical ideas. Students can use and connect various representations in the following ways:

- Describe connections among the way a ratio is represented with concrete models, fractions, and decimals.
- Describe connections among the way a percent is represented with concrete models, fractions, and decimals.
- Use several representations to explain what a percent is and interpret that percent in the context of a problem.

**Lesson 1 Teacher Materials**

### Lesson Overview

**Focusing Questions:** What are the characteristics of a linear function?

### Learning Outcomes:

- I can determine the linear function from a table using finite differences, including any restrictions on the domain and range.

**Textbook Alignment:** Chapter 1, Section 2  
 Sec 1.2 Algebraic Reasoning TWE 2024

### Texas Essential Knowledge and Skills (TEKS)

**AR.2C Patterns and structure.** The student applies mathematical processes to connect finite differences or common ratios to attributes of functions. The student is expected to determine the function that models a given table of related values using finite differences and its restricted domain and range;

**AR.1F Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to analyze mathematical relationships to connect and communicate mathematical ideas;

### English Language Proficiency Standards (ELPS)

**1.A Cross-curricular second language acquisition/learning strategies.** The ELL uses language learning strategies to develop an awareness of his or her own learning processes in all content areas. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to use prior knowledge and experiences to understand meanings in English;

### Pacing Guide

- Engage (10 minutes)
- Explore (15 minutes)
- Explain (20 minutes)
- Elaborate (35-45 minutes)
- Evaluate (10-15 minutes)



**Step 7:** Click the lesson component tile in the navigation panel. Browse through each lesson, reviewing links to teacher and/or student-facing artifacts and teacher supports for facilitating the lesson, differentiating instruction, and questioning strategies.

August 2024 Math - Grade 6 (...)

Unit 1: Decimals, Fractions, and Percents  
06 items

Unit 1, Lesson 1: Representing Ratios and P...  
03 items

**Exploration: Unit 1 Lesson 1**

Explanation: Unit 1 Lesson 1

Performance Task: Unit 1 Lesson 1

Unit 1, Lesson 2: Benchmark Fractions and Percents

## Exploration: Unit 1 Lesson 1

### Exploration (20-25 minutes)

- Group students in a visibly random way (e.g. playing cards, drawing straws, spinner, etc.) into groups no larger than three students per group.
- Watch the video: [M6U1I1 Representing Ratios and Percents.mp4](#)
- Distribute the activity sheet, [M6U1I1 Representing Ratios and Percents.pdf](#)
  - Answer Key [M6U1I1 Representing Ratios and Percents AK.pdf](#)
- Provide student groups with scissors and glue, tape, or paste.
- Facilitate student group exploration and reflection.

### Instructional Hints

- To connect with prior learning, provide students with hundreds grids to represent a decimal and visually illustrate the connection between the number of squares shaded and the number written as a percent.
- Proportionality rods (e.g., Cuisenaire® rods) are an excellent way to show relationships among quantities when demonstrating ratios. Use these as a visual representation to show the relationships with different ratios. For example, if a fruit basket contains 2 apples and 3 oranges, use proportionality rods to show the number of pieces of fruit in 2 baskets, 3 baskets, and so on.

### Support for Emergent Bilinguals

- Help students activate their prior knowledge (ELPS 1A) using strategies such as [graphic organizers](#) or a [KWL chart](#) to record what students already know about the topic. In this lesson, students should come into 6th grade with experience representing fractions and decimals using visual models such as fraction strips and hundreds charts. Activate that prior knowledge so that students may extend it to include fractions, decimals, and percents.

### Support Student Reasoning and Productive Struggle through Questioning

- Clarifying Question(s)
  - When you say \_\_\_\_\_, what do you mean?

003 August 2024 Algebraic Rea...

Engage: Unit 2, Lesson 1

**Explore: Unit 2, Lesson 1**

Explain: Unit 2, Lesson 1

Elaborate: Unit 2, Lesson 1

Evaluate: Unit 2, Lesson 1

## Unit 2, Lesson 1: Explore

**Explore (15 minutes)**

- Refer to your note from Unit 1, Lesson 2 to determine student groupings.
- Provide each group of no more than three students with a copy of the [STAAR Algebra 1 Reference Materials](#) and graphing technology.
- Assign the half the student groups that previously completed #1-6 to complete #7-12 on pages 13 and 14 and the other half of the student groups that previously completed #7-12 to complete #1-6 on pages 12 and 13.
- Facilitate student group exploration and reflection on pages 12-13. [Sec 1.2 Algebraic Reasoning SE 2024](#)
- Support for Emergent Bilinguals:
  - Writing newly acquired vocabulary helps emergent bilinguals internalize vocabulary they have recently learned. Using vocabulary from current and past learning experiences (e.g. linear function, finite differences) to explain their thinking and mathematical reasoning reinforces how these terms are consistent through a variety of contexts.
- As needed, support student reasoning and productive struggle through questioning.
  - Clarifying Question(s)
    - Can you explain that in a different way?
  - Focusing Question(s)
    - What is this problem about?
  - Advancing Question(s) [ask and walk away]
    - Which value(s) represent the slope?
    - Which value represents the y-intercept?
  - Assessing Question(s)
    - After groups that had different problems share with one another:
      - How does the answer for the second scenario compare to the beach house rental scenario?
      - Which of the two situations is an increasing function? A decreasing function?

**Step 8:** Middle school courses and *Algebraic Reasoning* have unit tests. *Algebraic Reasoning* also has mid-unit quizzes. Each course has printable PDFs of tests as well as interactive versions of the same quizzes and tests that students may take online.

**003 August 2024 Algebraic Reasoning**

**Mid-Unit 2 Quiz**

### Printable Quiz

Use the links below to view the answer key and a static (PDF) version of the Mid-Unit 2 quiz. Form A represents the on-level quiz and Form M represents a modified version for students who require modified assessments.

- AR Mid-Unit 2 Quiz Form A.pdf
- AR Mid-Unit 2 Quiz Form A Answer Key.pdf
- AR Mid-Unit 2 Quiz Form M.pdf
- AR Mid-Unit 2 Quiz Form M Answer Key.pdf

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### Interactive Quiz

Use the subsection that follows, AR Mid-Unit 2 Quiz, to display the online, interactive Mid-Unit 2 quiz. This version automatically randomizes the answer choices for multiple choice or single choice tests, so the question numbers may match the static (PDF) version above but the answer choices likely will not. You may also adjust the test settings in your Teacher Dashboard so that the questions are also randomized.

- AR Mid-Unit 2 Quiz Form A
- AR Mid-Unit 2 Quiz Form M

**Step 9:** Return to the Library and click on the TEKS Companion Guide Student Edition.

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Welcome Grade 8

Dashboard > Library

Library

Search by Title, Author, ISBN or Description

Item	Thumbnail	Description
001 Math-Grade 8 IMRA24 (Student Course)		001 Math-Grade 8 IMRA24 (Student Course)
001 Math-Grade 8 IMRA24 (Teacher Course)		001 Math-Grade 8 IMRA24 (Teacher Course)
003 Grade 8 TEKS Companion Guide Student Edition IMRA by Paul Gray Jr.		003 Grade 8 TEKS Companion Guide Student Edition IMRA by Paul Gray Jr.
003 Grade 8 TEKS Companion Guide Teacher Manual IMRA by Paul Gray Jr.		003 Grade 8 TEKS Companion Guide Teacher Manual IMRA by Paul Gray Jr.

**Step 10:** Explore the features of the ePub. In this review account, we present the entire *TEKS Companion Guide* as one book for ease of review. In the live version of the course, teachers assign one lesson to students as needed.

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### MULTIPLYING AND DIVIDING INTEGERS

The student is expected to represent integer operations with concrete models and connect the actions with the models to standardized algorithms.

The student is expected to add, subtract, multiply, and divide integers fluently.

---

**TELL ME MORE...**

An integer is a signed number that is a natural number or its opposite and 0. Integers are used to represent numbers where its direction from 0 is important.

As with any number, you can multiply or divide integers. Multiplication can be thought of in several different ways, including:

- scaling a quantity to be larger or smaller by a particular scale factor;
- representing area (length × width); or
- arrays with rows and columns.

**Multiplying with Same Signs**

$-4 \times -3 = 12$

Make 4 rows of 3 negative counters.

-4 × -3 means to take the opposite of 4 groups of -3 (negative counters flip and become positive).

Rule: Multiply the number parts of each integer. The product is positive.

**Multiplying with Different Signs**

$3 \times -4 = -12$

Make 3 rows of 4 negative counters.

There are 12 negative counters.

Rule: Multiply the number parts. The product is negative.

You can also use a number line to represent multiplication with integers. For example, consider  $2 \times -4$ .

Begin at 0 on the number line.

To multiply 2 by -4, show 4 jumps in the negative direction of 2 units each.

$2 \times -4 = -8$

Division is a grouping operation. The dividend tells you the total number of objects being divided. The divisor tells you how many groups there are. The quotient tells you the number of items in each group.

**Dividing with Same Signs**

$-12 \div -6 = 2$

Start with 12 negative counters.

How many groups of -6 can be made from -12? There are 2 groups.

Rule: Divide the number parts of each integer. The product is positive.

**Dividing with Different Signs**

$-12 \div 3 = -4$

Start with 12 negative counters.

Group them into 3 groups. There are 4 negative counters in each group.

Rule: Divide the number parts. The product is negative.

You can also use a number line to represent division with integers. For example, consider  $-10 \div -5$ .

Begin at 0 on the number line.

To divide -10 by -5, jump 5 units in the negative direction until reaching -10. There are 2 jumps.

$-10 \div -5 = 2$

**EXAMPLES**

**EXAMPLE 1:** Use a number line to determine the product of 4 and -6.

**STEP 1** Locate 0 on a number line.

**STEP 2** Draw an arrow above 0 that jumps 6 units 4 times in the negative direction.

- Notice that this number line is marked in intervals of 2, so keep that in mind when counting 6 units.

**STEP 3** Identify the number at the end of the 4 jumps.

$-24$

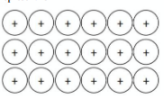
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COMPUTATIONS AND ALGEBRAIC RELATIONSHIPS 69



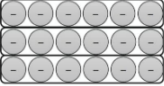
**Step 11:** Click the hot spot icon to see the questions in the Assessment Player. These question sets can be assigned to students through the ePub or the teacher’s Assessment dashboard. Questions are a variety of item types and students have access to an equation editor for short-answer style questions.

**EXAMPLE 2:** Simplify:  $18 \div -6 \times 4$ .

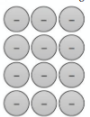
**STEP 1** Follow the order of operations to simplify  $18 \div -6$  first. Use 18 positive counters to represent 18.



**STEP 2** Group the counters into groups of 6. Since you're dividing by  $-6$ , also take the opposite sign of each counter.



**STEP 3** Make 4 rows of 3 negative counters to represent  $-3 \times 4$ .



$18 \div -6 \times 4 = -12$

**EXAMPLE 3:** An online television show lost 1,500 viewers each week for 4 weeks. What integer represents the change in the number of viewers over this four-week period?

**STEP 1** Determine which operation to use.

- The problem is asking for the change in the number of viewers.
- You are given a rate of a loss of 1,500 viewers per week and the number of weeks.
- You know a rate, 1,500 viewers each week, and a number related to the second quantity in the rate, 4 weeks.

**Multiplication**

**STEP 2** Write a number sentence with multiplication that you can use to solve the problem.

- A loss indicates a negative number, so there are  $-1,500$  viewers each week.
- Let  $n$  represent the total number of lost viewers.
- $-1,500 \times 4 = n$

**STEP 3** Simplify the multiplication expression.

- The signs are different, so multiply the number parts and the product will be negative.
- $-1,500 \times 4 = -6,000$

The change in the number of viewers is  $-6,000$ .

**PRACTICE**

Use two-color counters to determine the product or quotient.

1.  $3(7)$       2.  $-2(9)$       3.  $42 \div 7$

4.  $5 \times 6$       5.  $36 \div 9$       6.  $32 \div 4$

Use a number line to determine the product or quotient.

7.  $144 \div 12$       9.  $-8(15)$       11.  $(72 \div 8) \times 11$

8.  $13(25)$       10.  $720 \div 16$       12.  $5(18) \div 3(6)$

6.3CD Multi-Div YTI

Question: 1 of 1      Marks: 1

The coordinates of parallelogram  $ABCD$  are shown in the table. Point  $M$  is generated by multiplying the  $x$ - and  $y$ -coordinates of point  $C$  by 3. What are the coordinates of point  $M$ ?

Point	Coordinate
A	$(-1, 2)$
B	$(2, 5)$
C	$(4, -1)$
D	$(-2, -1)$

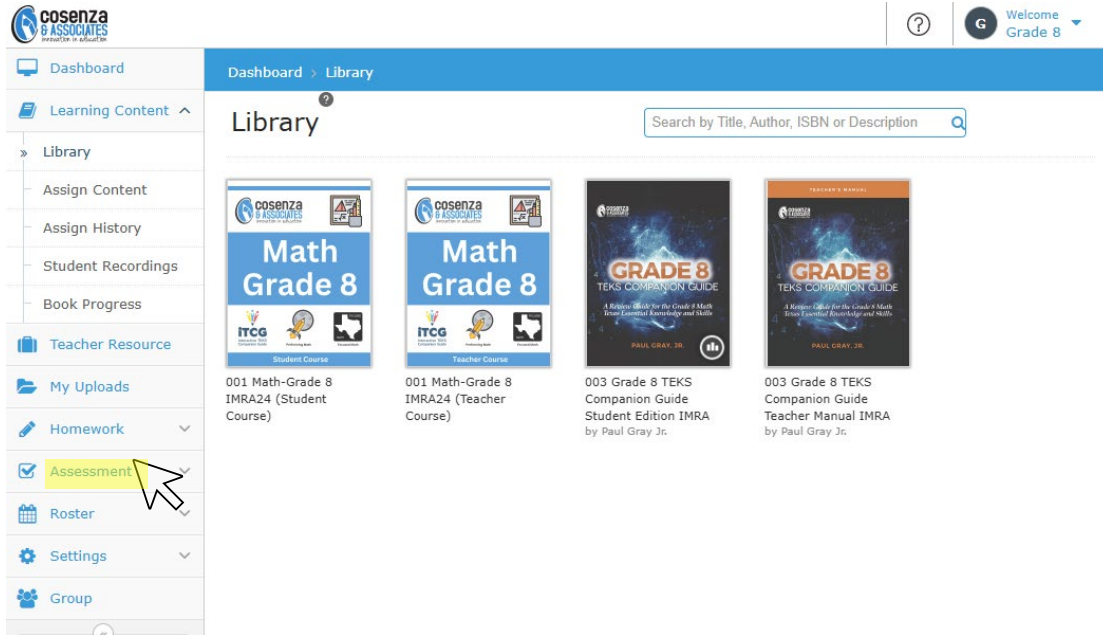
Coordinates of point C: (  ,  )

$x$ -coordinate of point  $M$ :  $3 \times$   =

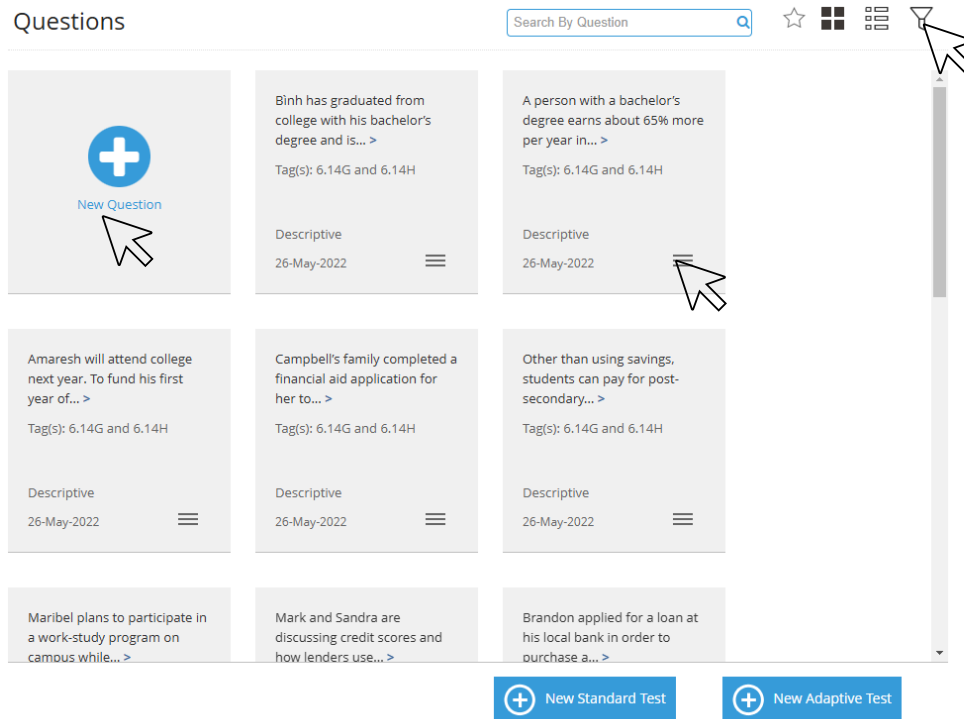
$y$ -coordinate of point  $M$ :  $3 \times$   =

Coordinates of point  $M$ : (  ,  )

**Step 12:** Return to the main window and click Assessment in the left-hand navigation panel. Click Questions.



**Step 13:** Browse through individual questions by clicking on the tile. The tile has the first few lines of the question, tags for the TEKS that the question assesses, and the question type (e.g., “descriptive” is a short answer question). Click the Filter icon to filter questions by tag (TEKS). Click the + tile to add a new question. Click the hamburger lines on any tile to clone and then edit an existing question.



**Step 14:** Click Standard Tests in the left-hand navigation panel under the Assessment tab. Practice/Homework questions, You-Try-It! questions, mid-unit quizzes, and unit tests are available as Standard Tests. Tests may be cloned and edited or created from the question bank. Click the + icon to create a new Standard Test using customized questions.

The screenshot shows the 'Standard Tests' page in the Cosenza & Associates system. The left-hand navigation panel is visible, with 'Standard Tests' highlighted under the 'Assessment' tab. The main content area is titled 'Standard Tests' and features a search bar, a 'Published' tab, and a 'Drafts' tab. Below these are several test cards, each representing a different assessment. The first card is a 'New Standard Test' button, indicated by a mouse cursor. The other cards are labeled '1.2 AR YTI', '1.3 AR YTI', '1.4 AR YTI', '1.5 AR YTI', '1.6 AR YTI', '1.7 AR YTI', and '1.8 AR YTI', each with a date and a menu icon.

Test ID	Date	Menu Icon
New Standard Test		
1.2 AR YTI	16-12-2022	☰
1.3 AR YTI	06-01-2023	☰
1.4 AR YTI	06-01-2023	☰
1.5 AR YTI	24-01-2023	☰
1.6 AR YTI	06-01-2023	☰
1.7 AR YTI	06-01-2023	☰
1.8 AR YTI	06-01-2023	☰