



## Pathway2Careers Assessment: Quantile® Tools



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Version: 20210824\_1420

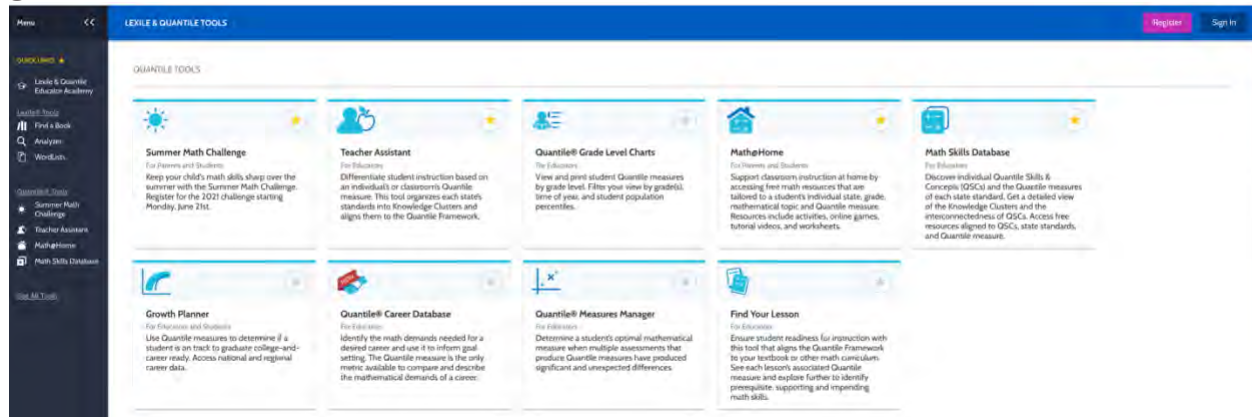


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## Lexile & Quantile Hub

URL: <https://Hub.Lexile.com/>

An online platform that provides easy access to math tools to support student learning and growth.



## Find Your Lesson

URL: <https://hub.lexile.com/find-your-lesson/search>

Ensure student readiness for instruction with this tool that aligns the **Quantile® Framework for Mathematics** with the **Pathway2Careers** math curriculum. Each lesson has been calibrated to provide a list of skills and associated Quantile® measures for that lesson. In addition, information about prerequisite, supporting, and impending math skills as well as calibrated resources to share with your students can be accessed here. Note that all calibrated resources are free and do not require a log in.

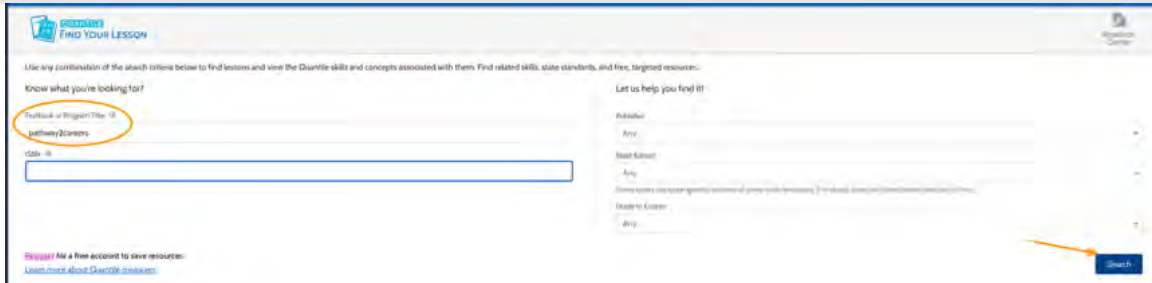
## Instructions

1. Enter “Pathway2Careers” in the **Textbook or Program Title** textbox and click the **Search** button.

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QUANTILE FIND YOUR LESSON

Use any combination of the search criteria below to find lessons and view the Quantile skills and concepts associated with them. Find related skills, state standards, and free, targeted resources.

Know what you're looking for?

Textbook or Program Title:

ISBN:

Let us help you find it!

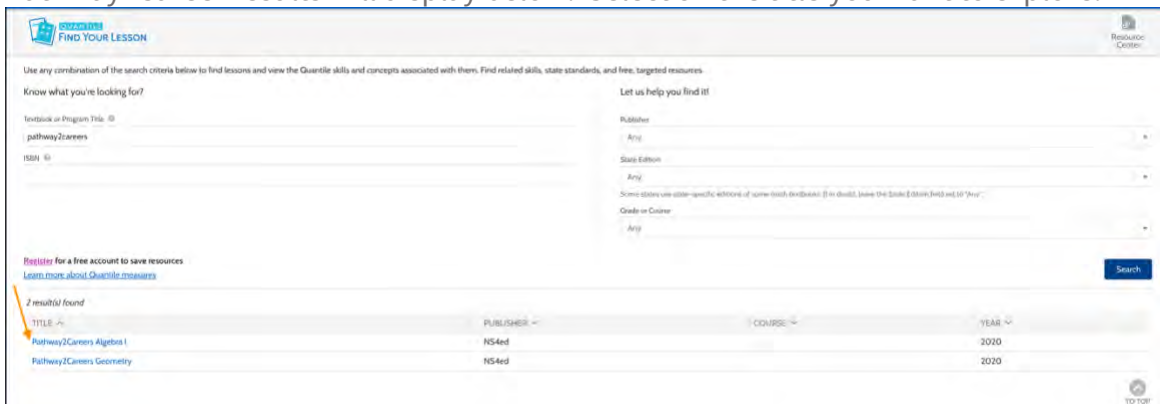
Publisher:

State Edition:

Grade or Course:

[Register for a free account to save resources.](#)  
[Learn more about Quantile measures.](#)

2. Pathway2Career results will display below. Select on the title you want to explore.



QUANTILE FIND YOUR LESSON

Use any combination of the search criteria below to find lessons and view the Quantile skills and concepts associated with them. Find related skills, state standards, and free, targeted resources.

Know what you're looking for?

Textbook or Program Title:

ISBN:

Let us help you find it!

Publisher:

State Edition:

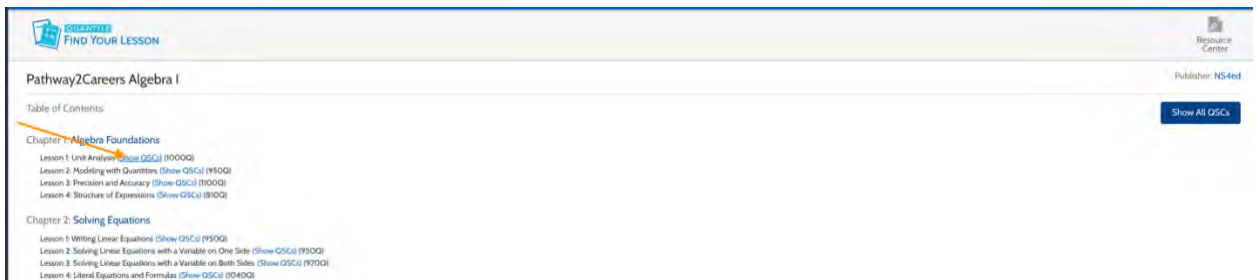
Grade or Course:

[Register for a free account to save resources.](#)  
[Learn more about Quantile measures.](#)

2 results found

TITLE	PUBLISHER	COURSE	YEAR
Pathway2Careers Algebra I	NS4ed		2020
Pathway2Careers Geometry	NS4ed		2020

3. The lessons will display with their related Quantile measure. To view the Quantile Skills and Concepts (QSCs) for a single lesson, click on the **Show QSCs** link for that lesson.



QUANTILE FIND YOUR LESSON

Pathway2Careers Algebra I

Table of Contents:

Chapter 1: Algebra Foundations

- Lesson 1: Unit Analysis (Show QSC) (1000Q)
- Lesson 2: Modeling with Quantities (Show QSC) (1500Q)
- Lesson 3: Precision and Accuracy (Show QSC) (1000Q)
- Lesson 4: Structure of Expressions (Show QSC) (1100Q)

Chapter 2: Solving Equations

- Lesson 1: Writing Linear Equations (Show QSC) (1500Q)
- Lesson 2: Solving Linear Equations with a Variable on One Side (Show QSC) (1500Q)
- Lesson 3: Solving Linear Equations with a Variable on Both Sides (Show QSC) (1700Q)
- Lesson 4: Literal Equations and Formulas (Show QSC) (1040Q)

Publisher: NS4ed

The Quantile Skill and Concepts for that lesson will be displayed.



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## Pathway2Careers Algebra I

### Table of Contents

#### Chapter 1: Algebra Foundations

Lesson 1: Unit Analysis ([Hide QSCs](#)) (1000Q)

QUANTILE SKILL AND CONCEPT DESCRIPTION	QUANTILE MEASURE	RESOURCES
Use models to find volume for prisms and cylinders as the product of the area of the base (B) and the height. Calculate the volume of prisms in number and word problems.	840Q	13
Determine the effect on the volume of solid figures when one or more dimension is changed.	970Q	5
<a href="#">Recognize and apply algebra techniques to solve rate problems including distance, work, density, and mixture problems.</a>	1000Q	13
Multiply or divide two decimals or a decimal and a whole number in number and word problems.	700Q	13
Solve number and word problems using percent proportion, percent equation, or ratios.	820Q	12
Use dimensional analysis to rename quantities or rates.	950Q	11

Lesson 2: Modeling with Quantities ([Show QSCs](#)) (950Q)

Lesson 3: Precision and Accuracy ([Show QSCs](#)) (1100Q)

Lesson 4: Structure of Expressions ([Show QSCs](#)) (810Q)

- To view the Quantile Skills and Concepts (QSCs) for all the lessons, click on the **Show All QSCs** button in the upper right-hand corner.

Pathway2Careers Algebra I

Table of Contents

Chapter 1: Algebra Foundations

- Lesson 1: Unit Analysis ([Show QSCs](#)) (1000Q)
- Lesson 2: Modeling with Quantities ([Show QSCs](#)) (950Q)
- Lesson 3: Precision and Accuracy ([Show QSCs](#)) (1100Q)
- Lesson 4: Structure of Expressions ([Show QSCs](#)) (810Q)

Chapter 2: Solving Equations


- Lesson 1: Writing Linear Equations ([Show QSCs](#)) (950Q)
- Lesson 2: Solving Linear Equations with a Variable on One Side ([Show QSCs](#)) (950Q)
- Lesson 3: Solving Linear Equations with a Variable on Both Sides ([Show QSCs](#)) (950Q)
- Lesson 4: Literal Equations and Formulas ([Show QSCs](#)) (9040Q)

Publisher: NS4ed

[Show All QSCs](#)



The Quantile Skills and Concepts for all the lessons will be displayed.



**QUANTILE**  
FIND YOUR LESSON

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## Pathway2Careers Algebra I

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Table of Contents

Chapter 1: Algebra Foundations

Lesson 1: Unit Analysis (Hide QSCs) (1000Q)

QUANTILE SKILL AND CONCEPT DESCRIPTION	QUANTILE MEASURE	RESOURCES
Use models to find volume for prisms and cylinders as the product of the area of the base (B) and the height. Calculate the volume of prisms in number and word problems.	840Q	13
Determine the effect on the volume of solid figures when one or more dimension is changed.	970Q	5
Recognize and apply algebra techniques to solve rate problems including distance, work, density, and mixture problems.	1000Q	13
Multiply or divide two decimals or a decimal and a whole number in number and word problems.	700Q	13
Solve number and word problems using percent proportion, percent equation, or ratios.	820Q	12
Use dimensional analysis to rename quantities or rates.	950Q	11

Lesson 2: Modeling with Quantities (Hide QSCs) (950Q)


QUANTILE SKILL AND CONCEPT DESCRIPTION	QUANTILE MEASURE	RESOURCES
Use grids to develop the relationship between the total numbers of square units in a rectangle and the length and width of the rectangle ( $l \times w$ ); find area using the formula in number and word problems.	560Q	10
Write a proportion to model a word problem; solve proportions.	720Q	8
Use models to find volume for prisms and cylinders as the product of the area of the base (B) and the height. Calculate the volume of prisms in number and word problems.	840Q	13
Multiply or divide with mixed numbers in number and word problems.	920Q	9
Write a ratio or rate to compare two quantities.	390Q	15
Use dimensional analysis to rename quantities or rates.	950Q	11
Solve multi-step number and word problems using the four operations.	580Q	5
Use the definition of rational numbers to convert decimals and fractions to equivalent forms.	830Q	11

Lesson 3: Precision and Accuracy (Hide QSCs) (1100Q)

- Click on the Quantile Skill and Concept Description to go to the [QSCs Details Page](#), which provides details about the QSCs (Knowledge Cluster: Prerequisite, Supporting,



and Impending Skills, Resources, and associated State Standards)


QUANTILE  
FIND YOUR LESSON

**Pathway2Careers Algebra I**

Table of Contents

Chapter 1: Algebra Foundations

Lesson 1: Unit Analysis (Hide QSCs) (1000Q)

QUANTILE SKILL AND CONCEPT DESCRIPTION	QUANTILE MEASURE	RESOURCES
Use models to find volume for prisms and cylinders as the product of the area of the base (B) and the height. Calculate the volume of prisms in number and word problems.	840Q	13
Determine the effect on the volume of solid figures when one or more dimension is changed.	970Q	5
<a href="#">Recognize and apply algebra techniques to solve rate problems including distance, work, density, and mixture problems.</a>	1000Q	13
Multiply or divide two decimals or a decimal and a whole number in number and word problems.	700Q	13
Solve number and word problems using percent proportion, percent equation, or ratios.	820Q	12
Use dimensional analysis to rename quantities or rates.	950Q	11

Lesson 2: Modeling with Quantities (Show QSCs) (950Q)  
 Lesson 3: Precision and Accuracy (Show QSCs) (1100Q)  
 Lesson 4: Structure of Expressions (Show QSCs) (810Q)

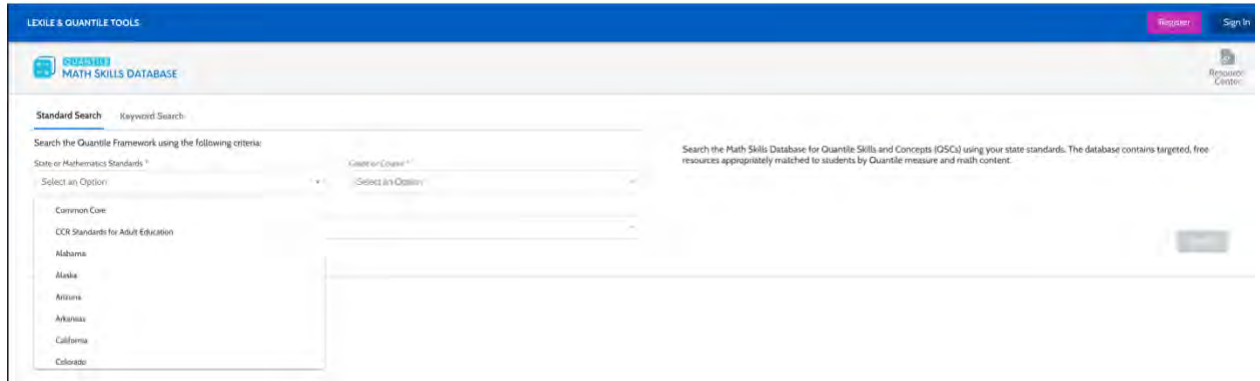
## Math Skills Database

URL: <https://hub.lexile.com/math-skills-database>

Unpack state standards to individual Quantile Skills and Concepts (QSCs) that make up the standards along with their Quantile measures. Review the details of a QSC for prerequisite, supporting, and impending skills, resources to share with students, and related state or mathematics standards.

## Instructions

1. Select the **State or Mathematics Standard** of your interest.



LEXILE & QUANTILE TOOLS Recover Sign In

**QUANTILE**  
MATH SKILLS DATABASE Resource Center

Standard Search Keyword Search

Search the Quantile Framework using the following criteria:

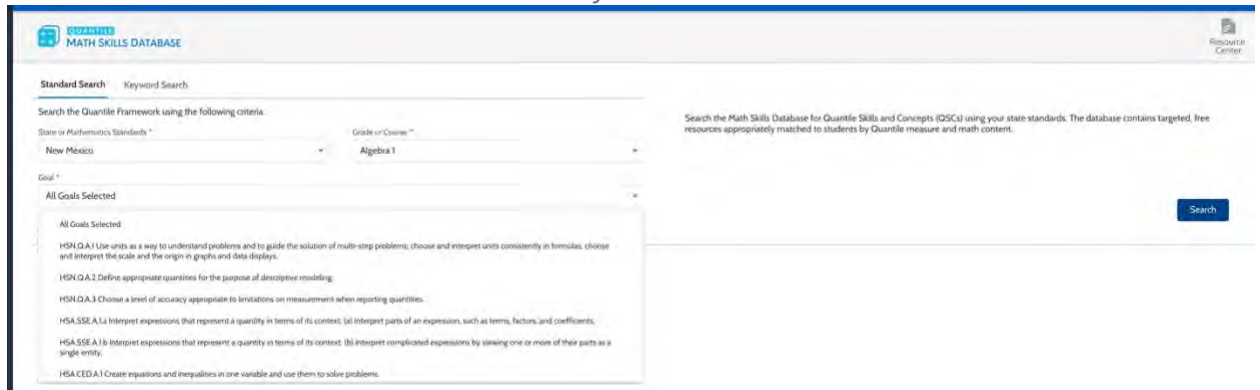
State or Mathematics Standards \* Grade or Course \*\*

Select an Option: Select an Option

- Common Core
- CCR Standards for Adult Education
- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado

Search the Math Skills Database for Quantile Skills and Concepts (QSCs) using your state standards. The database contains targeted, free resources appropriately matched to students by Quantile measure and math content.

2. Select the **Grade or Course** and the **Goal** of your interest and click the **Search** button



**QUANTILE**  
MATH SKILLS DATABASE Resource Center

Standard Search Keyword Search

Search the Quantile Framework using the following criteria:

State or Mathematics Standards \* Grade or Course \*\*

New Mexico Algebra 1

Goal \* Select an Option

All Goals Selected

All Goals Selected

- HSN.Q.A.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas, choose and interpret the scale and the origin in graphs and data displays.
- HSN.Q.A.2 Define appropriate quantities for the purpose of descriptive modeling.
- HSN.Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
- HSA.SSE.A.1a Interpret expressions that represent a quantity in terms of its context; (a) interpret parts of an expression, such as terms, factors, and coefficients.
- HSA.SSE.A.1b Interpret expressions that represent a quantity in terms of its context; (b) interpret complicated expressions by viewing one or more of their parts as a single entity.
- HSA.CED.A.1 Create equations and inequalities in one variable and use them to solve problems.

Search the Math Skills Database for Quantile Skills and Concepts (QSCs) using your state standards. The database contains targeted, free resources appropriately matched to students by Quantile measure and math content.

**Search**

3. From the QSCs results, click on the **QSC ID** or **QSC Description** to see more details about the QSCs (Knowledge Clusters and the interconnectedness of skills and



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concepts, Resources, or associated State Standards)

**LEXILE & QUANTILE TOOLS** Register Sign In

**MATH SKILLS DATABASE** Resource Center

Standard Search Keyword Search

Search the Quantile Framework using the following criteria:

State or Mathematics Standards \*  Grade or Course

Goal \*

Register for a free account to save resources. Search

New Mexico Common Core State Standards 2011 | 134 skill(s) found

STATE GOAL	OSC ID	OSC DESCRIPTION	QUANTILE MEASURE	STRAND
HSA.APR.A.1	OSC325	Add, subtract, and multiply polynomials.	1050Q	Algebra and Algebraic Thinking
HSA.APR.A.1	OSC1062	Recognize closure of number systems under a collection of operations and their properties with and without models; extend closure to analogous algebraic systems.	1000Q	Algebra and Algebraic Thinking
HSA.CED.A.1	OSC276	Write a linear equation or inequality to represent a given number or word problem; solve.	800Q	Algebra and Algebraic Thinking
HSA.CED.A.1	OSC332	Solve linear equations using the associative, commutative, distributive, and equality properties and justify the steps used.	950Q	Algebra and Algebraic Thinking
HSA.CED.A.1	OSC339	Evaluate expressions and use formulas to solve number and word problems involving exponential functions as exponential growth or decay.	1050Q	Algebra and Algebraic Thinking
HSA.CED.A.1	OSC370	Solve quadratic equations by graphing.	1140Q	Algebra and Algebraic Thinking
HSA.CED.A.1	OSC374	Solve quadratic equations using properties of equality.	1020Q	Algebra and Algebraic Thinking

## Quantile Skills and Concepts (QSCs) Details Page

In the **Knowledge Cluster** section, prerequisite, supporting, and impending skills are listed for the selected QSC. Related State Standards are also listed below

To see resources to share with your students to help them with the QSC, click on the **Show Resources** link on the right-hand side.

**OSC289** 840Q | Measurement

Use models to find volume for prisms and cylinders as the product of the area of the base (B) and the height. Calculate the volume of prisms in number and word problems.

Learn more about Skill and Concept Measures

**Knowledge Cluster** Hide 7 Related QSCs >

Prerequisite Skills (3)  
OSC257 Calculate the area of triangles, parallelograms, trapezoids, circles, and composite figures in number and word problems. (1040Q)  
OSC274 Evaluate algebraic expressions in number and word problems. (840Q)  
OSC280 Model the concept of the volume of a solid figure using cubic units. (1400Q)

Supporting Skills (1)  
OSC320 Use exponential notation and repeated multiplication to describe and simplify exponential expressions. (600Q)

Impending Skills (3)  
OSC370 Calculate the volume of cylinders, pyramids, and cones in number and word problems. (870Q)  
OSC379 Use models to investigate the relationship of the volume of a cone to a cylinder and a pyramid with the same base and height. (1040Q)  
OSC1077 Determine the volume of composite figures in number and word problems. (930Q)

**Resources** Show 13 Resources >

Register for a free account to save resources

**New Mexico State Standards** Hide 6 Standards >

Not your state? See associated standards for:  Submit

STANDARD ID	DESCRIPTION	COURSE
5.MD.C.5a	Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. (a) Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the height by the area of the base. Represent three-dimensional solids as volumes, e.g., to represent the associative property of multiplication.	Grade 5
5.MD.C.5b	Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. (b) Apply the formulas $V = l \times w \times h$ and $V = \frac{1}{2}bh \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems.	Grade 5

A list of links to helpful resources will be displayed.

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**Resources** Hide 13 Resources ^

[Register for a free account to save resources](#)

- [Virtual Need Video: How Do You Find the Volume of a Rectangular Prism?](#)
- [Virtual Need Video: How Do You Find the Volume of a Triangular Prism?](#)
- [Virtual Need Video: What is the Formula for the Volume of a Prism?](#)
- [Illustrative Mathematics: Christ's Building](#)
- [Illustrative Mathematics: Banana Bread](#)
- [Illustrative Mathematics: Computing Volume Progression 2](#)
- [Illustrative Mathematics: Computing Volume Progression 3](#)
- [Illustrative Mathematics: Computing Volume Progression 4](#)
- [Illustrative Mathematics: Shipping Rolled Oats](#)
- [Mathopolis Quiz: Volume of Prisms](#)
- [M.L.C. Introducing Volume](#)
- [M.L.C. Volume Review](#)
- [M.L.C. The Camping Trip](#)

## Student's Quantile Measure

When a student has been assessed and provided a Quantile measure, for a better understanding of what the student is ready to learn, search for Quantile Skills and Concepts related to the student's Quantile measure.

On the Math Skills Database, click on the Keyword Search tab, enter the student's Quantile measure in the Quantile Measure field, and click the Search button. QSCs within +/-50Q are displayed in the results.

**LEXILE & QUANTILE TOOLS** [Register](#) [Sign In](#)

**QUANTILE MATH SKILLS DATABASE** Resource Center

Standard Search **Keyword Search**

Search the Quantile Framework using the following criteria:

Keyword  
Type a keyword...

Quantile Measure  
**860Q**

QSC ID  
Enter a QSC ID

[Register for a free account to save resources](#)

52 skill(s) Found All Strands

QSC ID	QSC DESCRIPTION	QUANTILE MEASURE	STRAND
QSC210	Write an equation to describe the algebraic relationship between two defined variables in number and word problems, including recognizing which variable is dependent.	810Q	Algebra and Algebraic Thinking
QSC214	Describe data using the mean.	850Q	Data Analysis, Statistics, and Probability
QSC217	Draw and measure angles using a protractor. Understand that a circle measures 360 degrees.	850Q	Measurement
QSC219	Estimate the measure of an object in one system given the measure of that object in another system.	880Q	Measurement
QSC224	Multiply two fractions or a fraction and a whole number in number and word problems.	820Q	Numerical Operations
QSC227	Relate a percent to its equivalent fraction or decimal.	840Q	Number Sense
QSC230	Divide two fractions or a fraction and a whole number in number or word problems.	870Q	Numerical Operations



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## Teacher Assistant

URL: <https://hub.lexile.com/quantile-teacher-assistant>

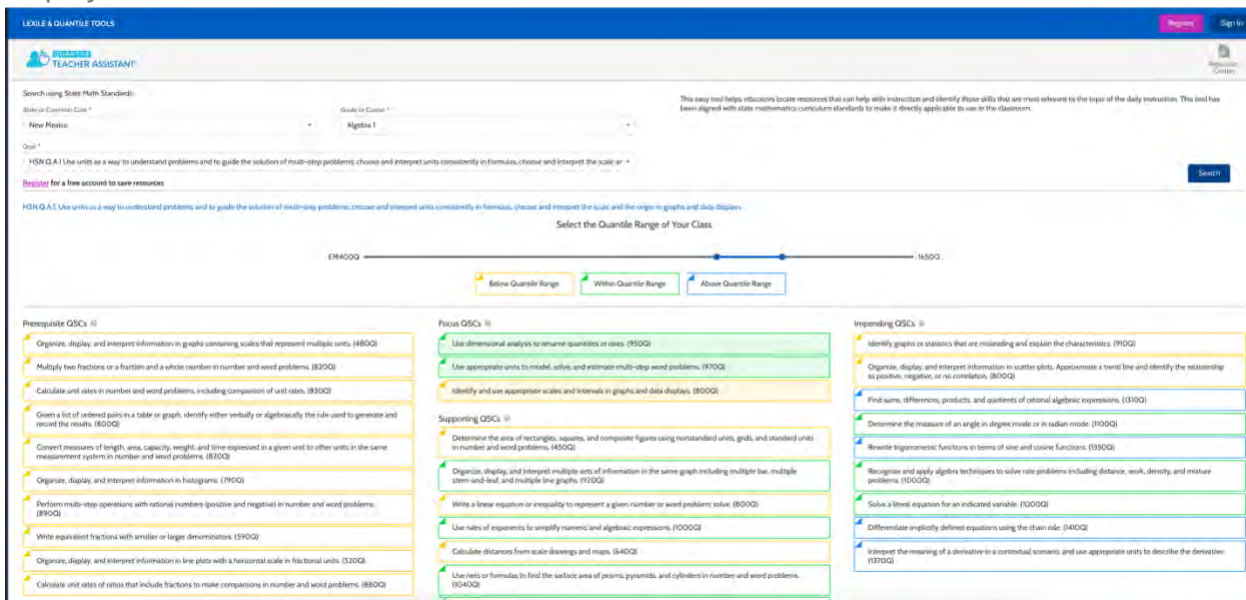
Differentiate student instruction based on an individual's or classroom's Quantile measure.

## Instructions

1. Select the **State or Common Core, Grade or Course** and **Goal**.

The screenshot shows the 'LEXILE & QUANTILE TOOLS' interface. At the top right, there are 'Register' and 'Sign In' buttons. Below the header, there's a 'TEACHER ASSISTANT' section. The main area is titled 'Search using State Math Standards:'. It has three dropdown menus: 'State or Common Core', 'Grade or Course', and 'Goal'. Below these are 'Select an Option' labels. A 'Register for a free account to save resources' link is at the bottom left. On the right, there's a text box explaining the tool's purpose: 'This easy tool helps educators locate resources that can help with instruction and identify those skills that are most relevant to the topic of the daily instruction. This tool has been aligned with state mathematics curriculum standards to make it directly applicable to use in the classroom.'

An interactive chart of prerequisite, focus, supporting, and impending QSCs is displayed.



2. To change the Quantile range of the QSCs, drag the blue dots in the Select the Quantile Range of Your Class section.

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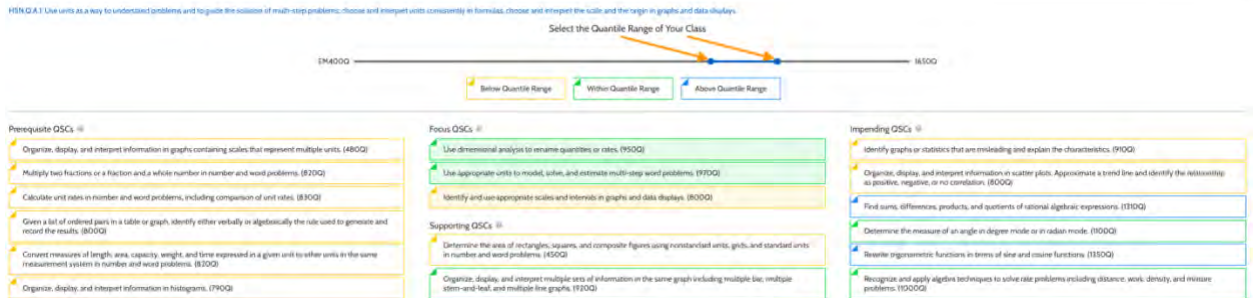


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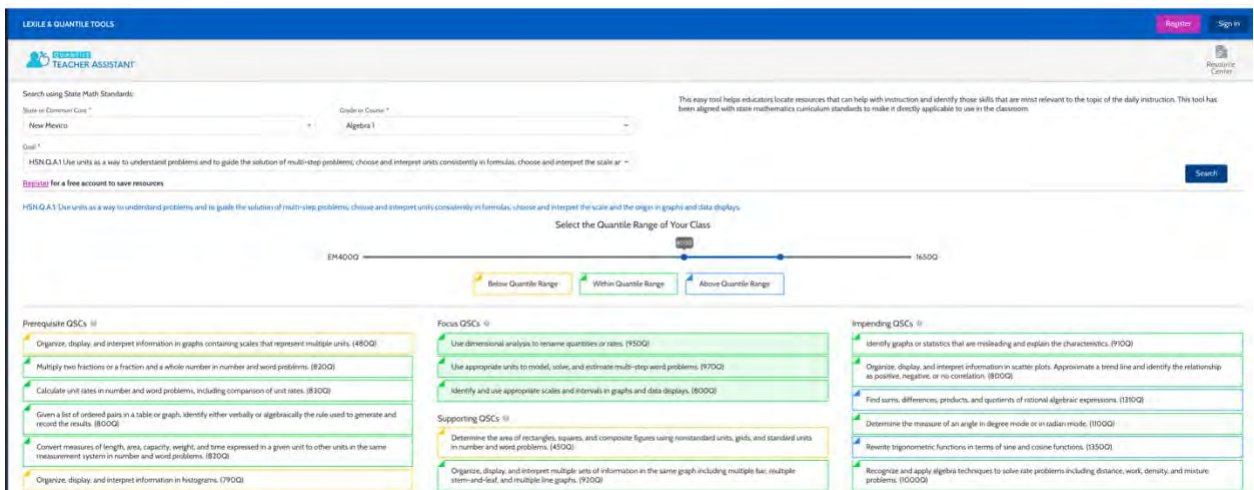
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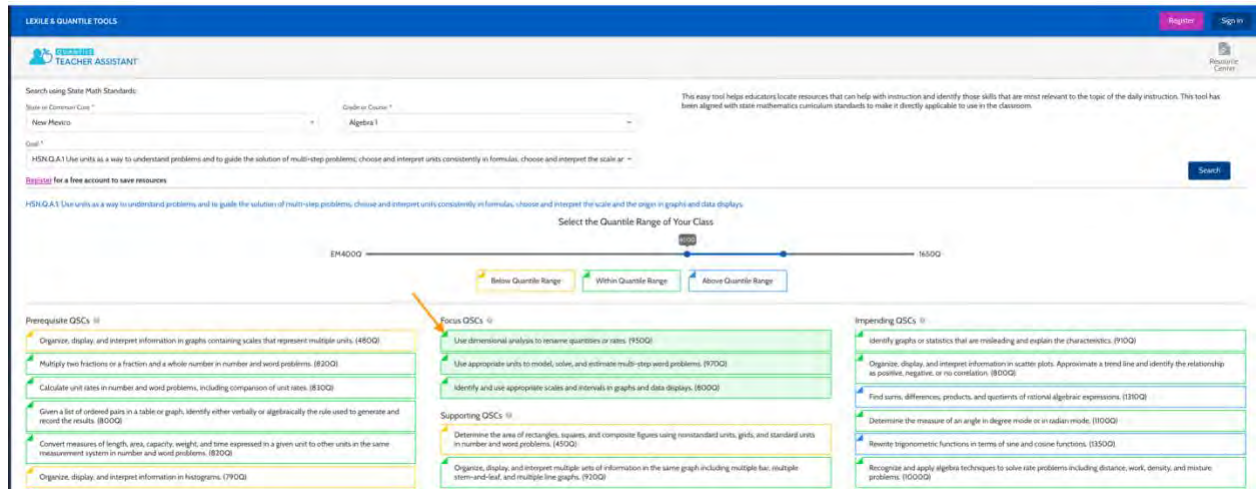


For example, drag the left dot from 915Q to 800Q to change the bottom Quantile range of your class. The QSCs in the chart below will update to reflect your new Quantile range.

Note that the colors in the chart change to reflect the new class Quantile range: yellow indicates that a QSC is below the Quantile range, green indicates that a QSC is within the Quantile range, and blue indicates that a QSC is above the Quantile range.



- To see more details about a QSC, click on the appropriate box to go to the [QSCs Details Page](#).



The screenshot shows the Lexile & Quantile Tools interface. At the top, there are search filters for 'State or Classroom Code' (New Mexico) and 'Grade or Course' (Algebra I). Below the filters, there is a 'Select the Quantile Range of Your Class' slider with three options: 'Below Quantile Range', 'Within Quantile Range', and 'Above Quantile Range'. The 'Within Quantile Range' option is selected. Below the slider, there are three columns of QSCs (Quantile Skill Codes) categorized as Prerequisite, Focus, and Impending. An arrow points to a 'Focus QSC' box.

## Quantile Grade Level Charts

URL: <https://hub.lexile.com/quantile-grade-level-charts>

View and print student Quantile measures by grade level. Compare your students to the national student norms.

## Instructions

- Select the grade(s) you are interested in viewing. You may select more than one grade.



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LEXILE & QUANTILE TOOLS

QUANTILE  
GRADE LEVEL CHARTS

### What are Quantile Student Measures by Grade?

A research study was conducted to describe Quantile ranges for each grade. Data for these national student norms

Looking for something specific?  
Filter the table using the selections below.

Grade:

Time of Year:

Percentiles of Students Measured:

You are viewing the 50th to 90th Percentile of the student population.

[Download PDF](#)

Grade	EOY - Spring	
	50th	90th
K	EM11SQ	190Q
1	120Q	390Q
2	310Q	565Q
3	470Q	725Q
4	615Q	865Q
5	715Q	960Q

2. Select the **Time of Year** you are interested in viewing. You may select more than one time of year.

Time of Year

- Beginning of Year (BOY) - Fall
- Middle of Year (MOY) - Winter
- End of Year (EOY) - Spring

[Download PDF](#)

3. To change the percentile of the student population, drag the blue dots in the **Percentiles of Students Measured** graph.





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**QUANTILE GRADE LEVEL CHARTS**

### What are Quantile Student Measures by Grade?

A research study was conducted to describe Quantile ranges for each grade. Data for these national student norms came from a sample of over 3 million students across the United States and the Virgin Islands who were administered tests that reported Quantile measures from 2010 to 2019.

Looking for something specific?  
Filter the table using the selections below:

Grade: 10, 9

Time of Year: End of Year (EOY) - Spring, Be...

Percentiles of Students Measured: 50th to 90th

You are viewing the 50th to 90th Percentile of the student population.

Grade	BOY - Fall		MOY - Winter		EOY - Spring	
	50th	90th	50th	90th	50th	90th
9	1020Q	1270Q	1035Q	1285Q	1055Q	1305Q
10	1080Q	1335Q	1100Q	1350Q	1115Q	1365Q

[Download PDF](#)

For example, drag the left dot from 50<sup>th</sup> to 25<sup>th</sup> to change the bottom percentile range of the student population.

**QUANTILE GRADE LEVEL CHARTS**

### What are Quantile Student Measures by Grade?

A research study was conducted to describe Quantile ranges for each grade. Data for these national student norms came from a sample of over 3 million students across the United States and the Virgin Islands who were administered tests that reported Quantile measures from 2010 to 2019.

Looking for something specific?  
Filter the table using the selections below:

Grade: 10, 9

Time of Year: End of Year (EOY) - Spring, Be...

Percentiles of Students Measured: 25th to 90th

You are viewing the 25th to 90th Percentile of the student population.

Grade	BOY - Fall		MOY - Winter		EOY - Spring	
	25th	90th	25th	90th	25th	90th
9	895Q	1270Q	915Q	1285Q	930Q	1305Q
10	960Q	1335Q	975Q	1350Q	990Q	1365Q

[Download PDF](#)

Note that the Quantile Grade Level Chart information is based on a research study conducted by MetaMetrics® to describe Quantile ranges for each grade. Data for these national student norms came from a sample of over 3 million students across the United States and the Virgin Islands who were administered tests that reported Quantile measures from 2010 to 2019.

