

# enVision Integrated Mathematics Program Overview

## *Introduction*

A presentation slide for the enVision Integrated Mathematics I Program Overview. The slide features the enVision logo and the text 'enVision Integrated MATHEMATICS I' at the top left. A dark teal banner across the top right contains the title 'Program Overview'. Below the banner, a bulleted list with three items is displayed: 'Explore your new program', 'Figure out what you have', and 'Identify a few resources to focus on'. At the bottom left, there is a photograph of a teacher and three students sitting around a table, looking at a tablet and papers. The right side of the slide has a dark background with a futuristic, circular graphic element.

Welcome to **enVision** Integrated Mathematics!

Let's explore your new program, figure out what you have, and identify a few resources to focus on as you get started.

## What Do I Have?



First, let's check out the **enVision** Integrated materials so you know what you have.

Later, we'll look at how to use a few of the key resources as you get started.

## Components

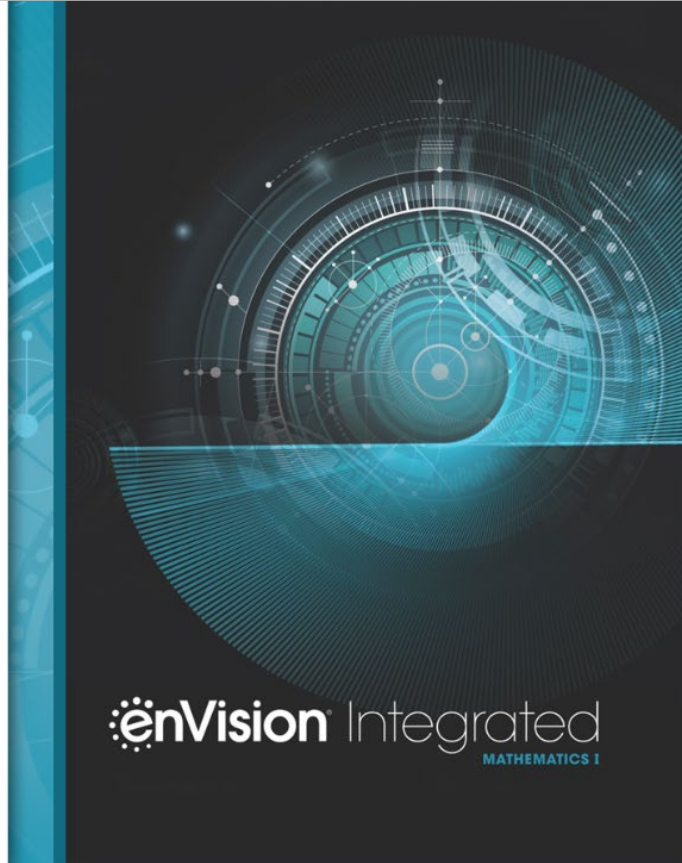


Let's learn about the components.

## Student Edition

### Student Edition

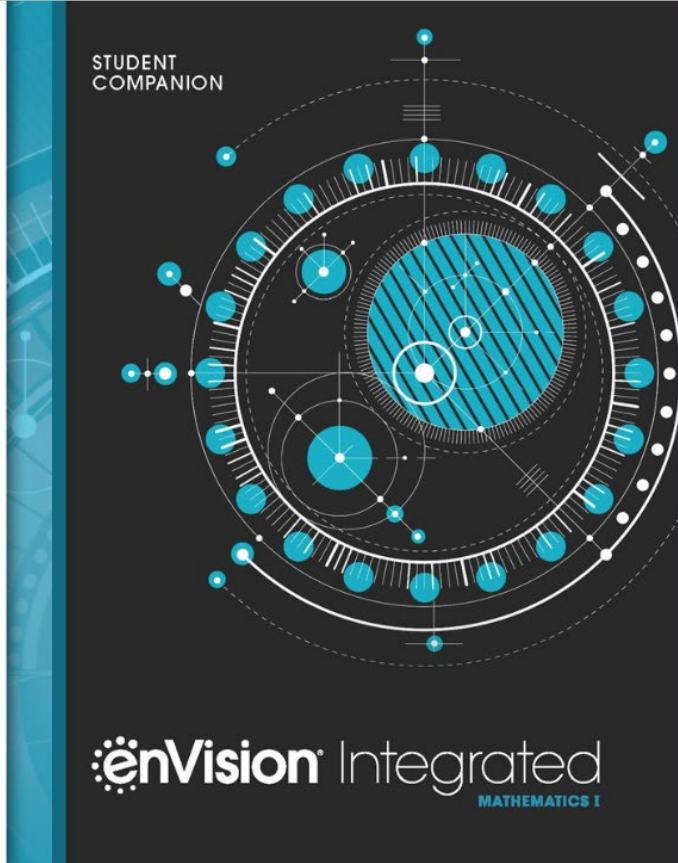
This textbook provides all instructional content for students. Each lesson has a balance of conceptual understanding, procedural fluency, and application during both instruction and practice.



## Student Companion

### Student Companion

This optional worktext actively engages students in class by providing them with space for note taking, Habits of Mind questions, and problems to try on their own. These features are also built in to the Interactive Student Edition.



## Teacher's Edition

### Teacher's Edition

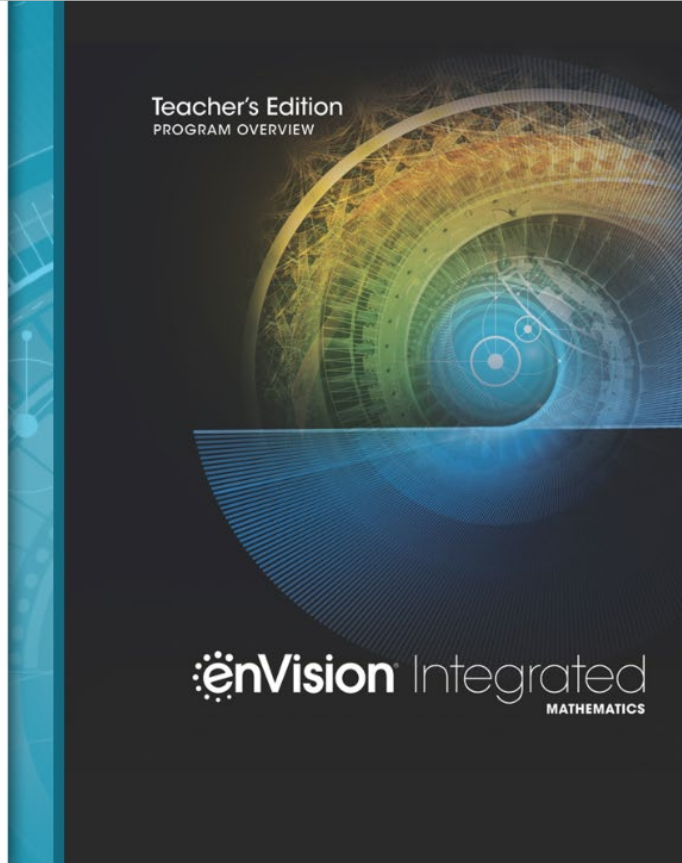
This two-volume set provides teaching support aligned to NCTM's Effective Mathematical Teaching Practices. Each topic and lesson begins with an overview that highlights the focus, coherence, rigor, and math practices to help you plan.



## Teacher's Edition Program Overview

### *Teacher's Edition Program Overview*

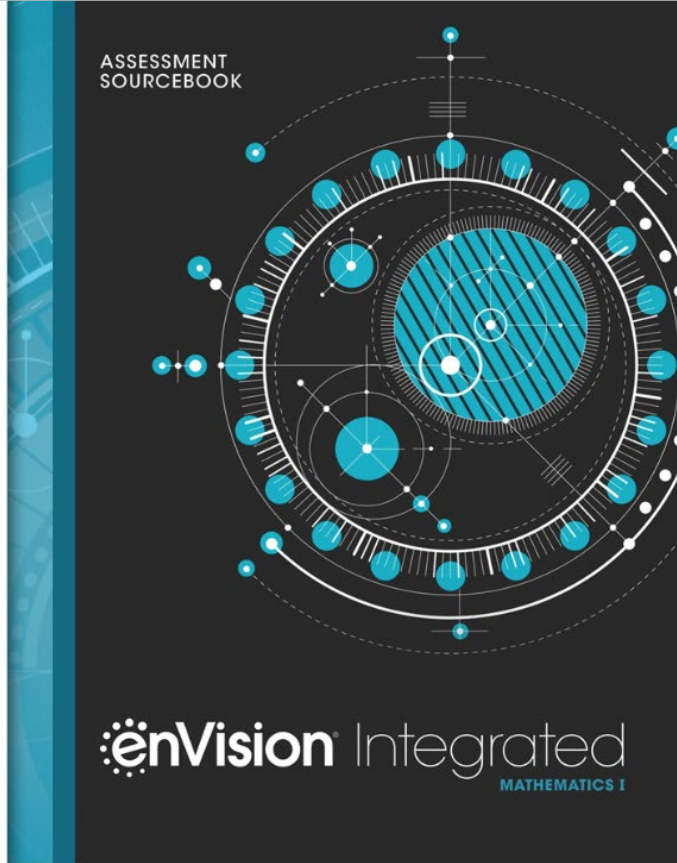
This implementation guide contains an overview of the program, a pacing guide, and a User's Guide that contains step-by-step information about how to plan and teach with enVision Integrated.



## Teacher Assessment Sourcebook

### *Teacher Assessment Sourcebook*

This book contains diagnostic and summative assessment masters in one convenient place. All assessments are also available online at [PearsonRealize.com](http://PearsonRealize.com).





## Savvas Realize

### Savvas Realize™

This online learning management system has everything you need to incorporate a little technology into your lessons or to go fully digital! You'll find digital versions of program components, interactive tools powered by Desmos, editable lesson plans, and more!



## How Do I Use It?



Let's focus on the key components:

- *Teacher's Edition Program Overview*
- Teacher's Edition
- Student Edition
- Pearson Realize



Let's focus on the key components of **enVision** Integrated.

Grab your *Teacher's Edition Program Overview*, Teacher's Edition, and Student Edition, and let's look at some starting places in each of them.

Then we'll check out some digital resources on Savvas Realize.

## Teacher’s Edition Program Overview

TEACHER’S EDITION PROGRAM OVERVIEW CONTENTS	
About the Authors . . . . .	4
<b>OVERVIEW of enVision Integrated MATHEMATICS</b>	
Integrated Sequence Overview . . . . .	5
From the Authors: Program Goal and Organization . . . . .	8
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Focus, Coherence, Rigor. . . . .	12
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<b>Integrated Mathematics I</b>	
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Welcome to the enVision® Integrated Mathematics User’s Guide . . . . .	67
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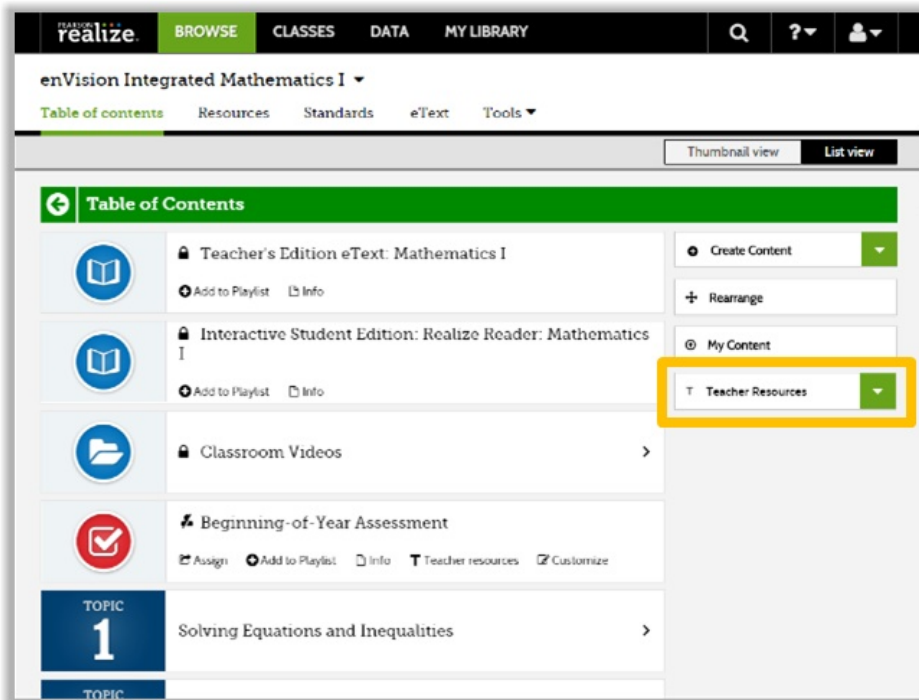
The *Teacher’s Edition Program Overview (TEPO)* has lots of valuable information.

Review the Overview section for information about the instructional design.

Then look over the Pacing Guide. Notice each topic contains several content-focused lessons and a Mathematical Modeling in 3 Acts lesson. There are pacing recommendations for both traditional and block schedules.

Read through the User’s Guide, especially the Using a Lesson section that explains the lesson structure.

### Quick Tip



### Quick Tip

Common Core Teachers: There's more information about the Common Core Pathway and Pacing on Pearson Realize under the Teacher Resources menu.

## Teacher's Edition



The Teacher's Edition has planning and instructional support at the topic and lesson levels.

Each topic begins with Math Background pages explaining the focus, coherence, rigor, and math practices and processes that are central to the key mathematical ideas of the topic.

Check out the Topic Planner for an overview of the topic.

Review the information about the Topic Readiness Assessment and use the test to assess your students' prior knowledge.

Check out the Topic Opener and the **enVisionSTEM™** Project and introduce the topic and project to your students.

Review the Lesson Overviews to find key information to help you plan your daily lessons.

Let's look at the four-step lesson structure next using the Student Edition.

**Student Edition**

Step 1

Step 2

Step 3

Step 4

Click each step to learn more.  
When you're done,  
click **Next**.

**enVision** Integrated  
MATHEMATICS 1

Let's look at each step in the four-step lesson structure.

**Step 1**

**Step 1: Critique & Explain, Explore & Reason, or Model & Discuss task**

Problem-based learning  
Activate prior knowledge

**1-1**

**Solving Linear Equations**

pearsonrealize.com

I CAN... create and solve linear equations with one variable.

**MODEL & DISCUSS**

Joshua is going kayaking with a group during one of his vacation days. In his vacation planning, he budgeted \$50 for a kayak rental.

KAYAK RENTALS	
	Rental Rates
	Per hour
single kayak	\$15
single sea kayak	\$18
double kayak	\$25

- A. How can Joshua determine the number of hours he can rent a kayak for himself? Describe two different options.
- B. Joshua found out that there is a \$25 nonrefundable equipment fee in addition to the hourly rates. How does this requirement change the mathematics of the situation?
- C. **Look for Relationships** How do the processes you used for parts A and B differ? How are they the same?

**ESSENTIAL QUESTION** How do you create equations and use them to solve problems?

**CONCEPTUAL UNDERSTANDING**

**EXAMPLE 1** Solve Linear Equations

What is the value of  $x$  in the equation  $\frac{2(x+4)}{3} - 8 = 32$ ?

<p><b>Method 1</b></p> $\frac{2(x+4)}{3} - 8 = 32$ $2(x+4) - 24 = 96$ $2x + 8 - 24 = 96$ $2x = 112$ $x = 56$	<p>OR</p>	<p><b>Method 2</b></p> $\frac{2(x+4)}{3} - 8 = 32$ $\frac{2(x+4)}{3} = 40$ $2(x+4) = 120$ $x + 4 = 60$ $x = 56$
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Multiply each side by 3 first.
Add 8 to each side first.

**VOCABULARY**  
Remember, a variable is an unknown quantity, or a quantity that can vary. An equation is a mathematical statement with two expressions set equal to each other. A solution of an equation is a value for the variable that makes the equation a true statement.

Each solving method yields the same solution. Is one method better than the other?

Look at how the expression on the left side of the original equation is built up from  $x$ .

$$x \rightarrow x + 4 \rightarrow 2(x + 4) \rightarrow \frac{2(x + 4)}{3} \rightarrow \frac{2(x + 4)}{3} - 8$$

Notice how Method 2 applies these steps in reverse to isolate  $x$ . This is often a good strategy and can lead to simpler solution methods.

**Try It!** 1. Solve the equation  $4 + \frac{3x-1}{2} = 9$ . Explain the reasons why you chose your solution method.

Step 2

Step 2: Understand & Apply

Build conceptual understanding with multiple representations

Gather formative assessment data

**CONCEPT SUMMARY** Create and Solve Linear Equations

Use the following information about Kelsey's visit to the flower shop.

- Kelsey bought some roses and tulips.
- She bought twice as many tulips as roses.
- Roses cost \$5 each.
- Tulips cost \$2 each.
- Kelsey spent \$36 total.

How many of each kind of flower did Kelsey buy?

**WORDS** Write an equation to represent the situation.

Cost of Roses	+	Cost of Tulips	=	Total Cost
(Cost of One Rose)(Number of Roses)	+	(Cost of One Tulip)(Number of Tulips)	=	Total Cost

**ALGEBRA**  $55 \cdot x + 52 \cdot 2x = 536$

$$5x + 4x = 36$$

$$9x = 36$$

$$x = 4$$

Kelsey bought 4 roses and 8 tulips.

---

**Do You UNDERSTAND?**

- ESSENTIAL QUESTION** How do you create equations and use them to solve problems?
- Reason** What is a first step to solving for  $x$  in the equation  $9x - 7 = 10$ ? How would you check your solution?
- Use Structure** For an equation with fractions, why is it helpful to multiply both sides of the equation by the LCD?
- Error Analysis** Venetta knows that  $1 \text{ mi} \approx 1.6 \text{ km}$ . To convert  $5 \text{ mi/h}$  to  $\text{km/h}$ , she multiplies  $5 \text{ mi/h}$  by  $\frac{1 \text{ mi}}{1.6 \text{ km}}$ . What error does Venetta make?

**Do You KNOW HOW?**

Solve each equation.

- $4b + 14 = 22$
- $-6k - 3 = 39$
- $15 - 2(3 - 2x) = 46$
- $\frac{2}{3}y - \frac{2}{5} = 5$
- Terrence walks at a pace of  $2 \text{ mi/h}$  to the theater and watches a movie for 2 h and 15 min. He rides back home, taking the same route, on the bus that travels at a rate of  $40 \text{ mi/h}$ . The entire trip takes 3.5 h. How far along this route is Terrence's house from the theater? Explain.

LESSON 1-1 Solving Linear Equations 9



**Step 3**

**Step 3: Practice & Problem Solving**

**PRACTICE & PROBLEM SOLVING**

**UNDERSTAND**

10. **Use Structure** What could be a first step to solving the equation  $3x + 0.5(x + 3) + 4 = 14$ ? Explain.
11. **Make Sense and Persevere** The sum of four consecutive integers is  $-18$ . What is the greatest of these integers?
12. **Error Analysis** Describe and correct the error a student made when solving the equation  $4 = -2(x - 3)$ . What is the correct solution?

$$\begin{array}{l} 4 = -2(x - 3) \\ 4 = -2x - 6 \\ 4 + 6 = -2x - 6 + 6 \\ 10 = -2x \\ \frac{10}{-2} = \frac{-2x}{-2} \\ -5 = x \end{array}$$

13. **Communicate Precisely** Parker ran on a treadmill at a constant speed for the length of time shown. How many miles did Parker run? Explain.



14. **Reason** The Division Property of Equality says that for every real number  $a$ ,  $b$ , and  $c$ , if  $a = b$  and  $c \neq 0$ , then  $\frac{a}{c} = \frac{b}{c}$ . Why does the property state that  $c \neq 0$ ?
15. **Higher Order Thinking** Tonya's first step in solving the equation  $\frac{1}{3}(2y + 4) = -6$  is to use the Distributive Property on the left side of the equation. Deon's first step is to multiply each side by 2. Which of these methods will result in an equivalent equation? Explain.

Scan for Multimedia Practice Schedule Additional Exercise Assets Online

**PRACTICE**

- Solve each equation. SEE EXAMPLES 1 AND 2
16.  $-4x + 3x = 2$  **-2**
17.  $7 = 5y - 13 - y$  **5**
18.  $7m - 4 - 9m - 36 = 0$  **-20**
19.  $-2 = -5t + 10 + 2t$  **4**

- Solve each equation. SEE EXAMPLES 3 AND 4
20.  $2(2x + 1) = 26$  **6**
21.  $-2(2x + 1) = 26$  **-7**
22.  $92 = -4(2r - 5)$  **-9**
23.  $10(5 - n) - 1 = 29$  **2**
24.  $-(7 - 2x) + 7 = -7$   **$-\frac{7}{2}$ , or  $-3\frac{1}{2}$**
25.  $200 = 16(6t - 3)$   **$2\frac{1}{2}$ , or  $2\frac{1}{2}$**

- Solve each equation. SEE EXAMPLE 5
26.  $\frac{1}{2}x + 2 = 1$   **$-\frac{3}{2}$**
27.  $\frac{3}{2}x - \frac{2}{5}x = 2$   **$\frac{20}{11}$**
28.  $\frac{1}{5}(k - 3) = \frac{3}{4}$   **$\frac{27}{4}$**
29.  $\frac{7}{60} = \frac{3}{24}w + \frac{11}{12}$   **$-\frac{1}{10}$**
30.  $\frac{3m}{4} - \frac{m}{12} = \frac{7}{8}$   **$\frac{14}{3}$**
31.  $1,290 = \frac{h}{10} + \frac{h}{5}$  **12,900**

- Solve each equation.
32.  $0.1r - 1 = 0.65$  **16.5**
33.  $1.2n + 0.68 = 5$  **3.6**
34.  $0.025(q + 2) = 2.81$  **110.4**
35.  $-0.07p - 0.6 = 5$  **-80**
36.  $1.037x + 0.02x + 25 = 30.285$  **5**
37.  $-0.85t - 0.85t - 3.9 = -8.15$  **2.5**

38. A bee flies at 20 feet per second directly to a flowerbed from its hive. The bee stays at the flowerbed for 15 minutes, then flies directly back to the hive at 12 feet per second. It is away from the hive for a total of 20 minutes. SEE EXAMPLE 5
- a. What equation can you use to find the distance of the flowerbed from the hive?
- b. How far is the flowerbed from the hive?

Step 4

Step 4: Assess & Differentiate

Lesson Quiz

Targeted differentiation

STEP 4 Assess & Differentiate

PearsonRealize.com

DIFFERENTIATED RESOURCES I = Intervention O = On-Level A = Advanced

This activity is available as a digital assignment powered by MathXL® for School

AVAILABLE ONLINE

**Reteach to Build Understanding** I O

Provides scaffolded reteaching for the key lesson concepts.

**Additional Practice** I O A

Provides extra practice for each lesson.

**Enrichment** O A

Presents engaging problems and activities that extend the lesson concepts.

**1.1 Reteach to Build Understanding**

Identify the equation of the line that passes through the point (2, 3) and is perpendicular to the line  $y = 2x + 1$ .

1. Write the slope of the given line.

2. Write the slope of the line perpendicular to the given line.

3. Write the equation of the line that passes through the point (2, 3) and is perpendicular to the line  $y = 2x + 1$ .

**1.1 Additional Practice**

Write each equation.

1.  $y - 3 = 2(x + 1)$

2.  $x + 2y = 6$

3.  $x - 2y = 4$

4.  $x + y = 5$

5.  $x - y = 3$

6.  $x + 2y = 1$

7.  $x - 2y = 3$

8.  $x + y = 1$

9.  $x - y = 1$

10.  $x + y = 3$

11.  $x - y = 3$

12.  $x + y = 1$

13.  $x - y = 3$

14.  $x + y = 1$

15.  $x - y = 3$

16.  $x + y = 1$

17.  $x - y = 3$

18.  $x + y = 1$

19.  $x - y = 3$

20.  $x + y = 1$

**1.1 Enrichment**

Write the equation of the line that passes through the point (2, 3) and is perpendicular to the line  $y = 2x + 1$ .

1. Write the slope of the given line.

2. Write the slope of the line perpendicular to the given line.

3. Write the equation of the line that passes through the point (2, 3) and is perpendicular to the line  $y = 2x + 1$ .

**Mathematical Literacy and Vocabulary** I O

Helps students develop and reinforce understanding of key terms and concepts.

**1.1 Mathematical Literacy and Vocabulary**

Write the equation of the line that passes through the point (2, 3) and is perpendicular to the line  $y = 2x + 1$ .

Step	Work	Justification
1	Write the slope of the given line.	
2	Write the slope of the line perpendicular to the given line.	
3	Write the equation of the line that passes through the point (2, 3) and is perpendicular to the line $y = 2x + 1$ .	

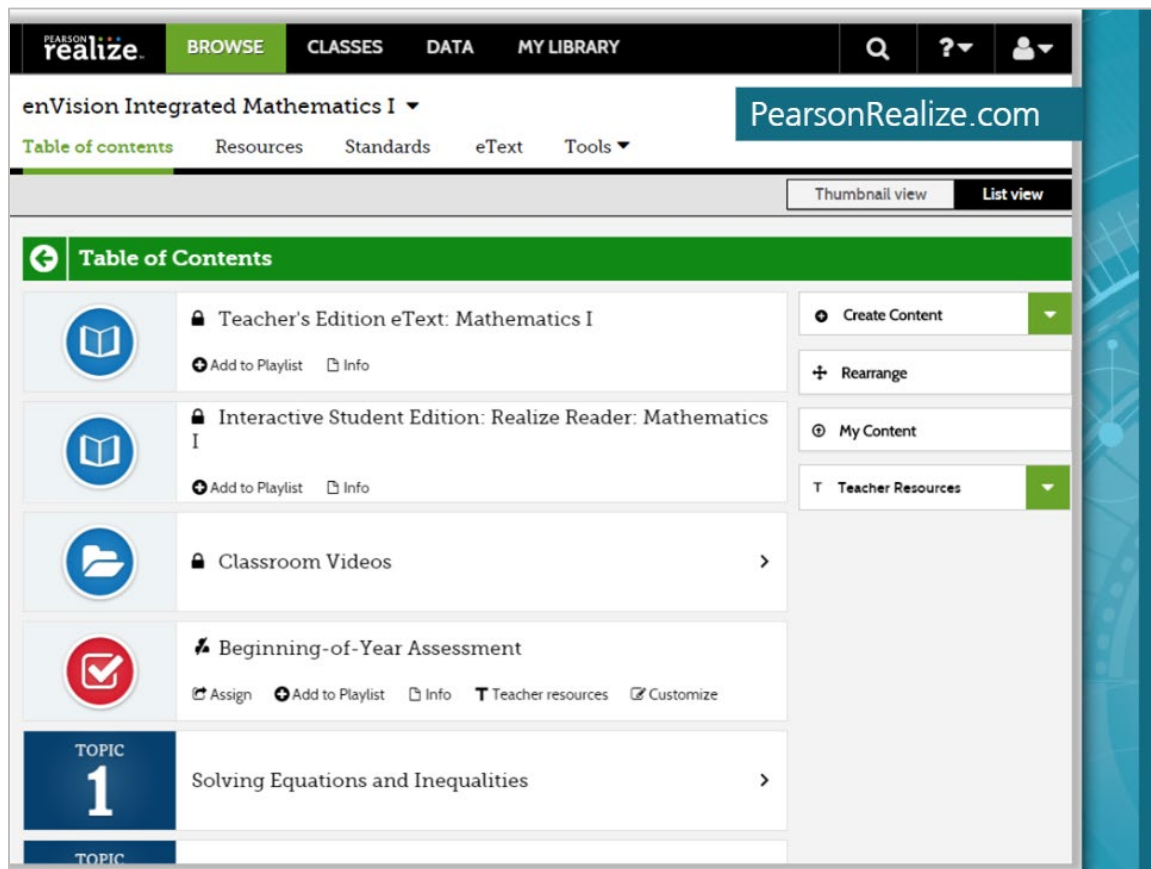
**Digital Resources and Video Tutorials** I O A

The Reteach to Build Understanding, Additional Practice, and Enrichment activities are available as digital assignments powered by MathXL for School. These activities are automatically assigned when students complete the lesson quiz online and are automatically scored.

Students can access instructional tutorials using the Virtual Nerd app.

Students can also access Virtual Nerd videos using the BouncePages app to scan exercise pages marked with this icon. Students can download both apps for free in their mobile devices' app store.

**Savvas Realize**



Check out the engaging resources on Savvas Realize, including digital versions of the components and lesson parts we explored earlier.

Notice the anytime interactive Desmos graphing and geometry tools in the Tools menu. There are also embedded Desmos interactivities in the Interactive Student Edition for you and your students to explore.

Check out the **enVision** Integrated and Savvas Realize pages on MySavvasTraining.com for more information.

*Closing*

A promotional graphic for enVision Integrated Mathematics I. The top left features the enVision logo and the text "enVision Integrated MATHEMATICS I". To the right, the text "Thank you!" is displayed in a large, white, sans-serif font. Below this, a photograph shows a male teacher leaning over a desk, pointing at a laptop screen while three students (two boys and one girl) look on. The background of the graphic is dark with a teal and blue circular pattern resembling a globe or a data visualization. At the bottom, the text "my SAVVAS Training" is written in a white, sans-serif font.

Thanks for checking out this overview of the **enVision** Integrated Mathematics program.

There is a lot of information waiting here on [MySavvasTraining.com](http://MySavvasTraining.com) when you're ready to learn more!