MATHEMATICS FLORIDA STANDARDS

Algebra 1

Program Overview and Sampler

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MATHEMATICS FLORIDA STANDARDS

Algebra 1

Preparing for College and Career

The ***Mathematics Florida Standards*** program provides the foundation for Algebra 1 success. Students learn through direct instruction, discovery-based learning, and guided practice, allowing them to transfer skills to real-world situations, problem-solving activities, and the Florida Standards Assessment (FSA) End-of-Course (EOC). Through active discourse and collaborative activities, students learn to communicate effectively and gain the perseverance necessary to solve difficult problems.

Learning Through Multiple Approaches

Discovery-Based Learning	Application
• Guided Instruction • Guided Practice • Connect to Testing	• Concepts in the Real World • Extension and Interactive Activities • Authentic FSA EOC Practice
Personalized Practice	**Direct Instruction**
• *i-Practice* Personalized Assignments (Digital) • Video Model Problems (QR Codes, Digital) • Multiple Problem Help Options (Digital)	• Lesson Introduction • Words to Know • Remediation Activities

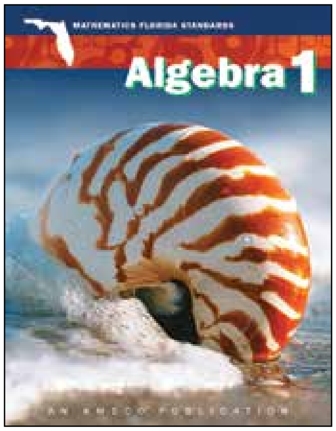
Student-Centered Approach to Algebra 1

The ***Mathematics Florida Standards*** program focuses on active learning. Engage students as they explore concepts, learn through guided instruction, and apply their knowledge in the extension and assessment activities.

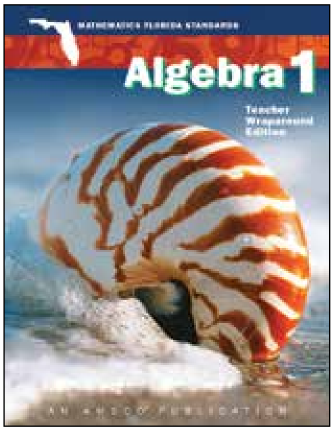
Prepare Students for Success

Designed specifically for the Florida Mathematics Standards, the curriculum ensures that students will have the knowledge and skills that matter for both the FSA EOC and their college and career paths.

Program Components

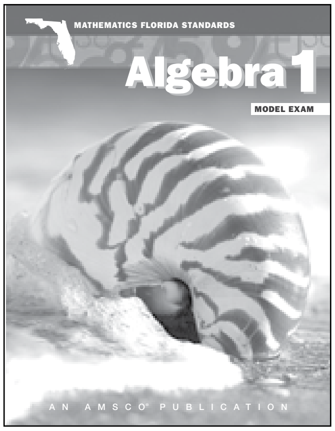


Student Worktext



Teacher Wraparound Edition

Florida Algebra 1 Digital



Model Exam

PERSONALIZED LEARNING

- Lesson videos, accessed through QR codes, provide students with model problems on demand.
- Digital assignments can be customized and delivered individually, to small groups, or to the whole class.
- Through *i-Practice*, each student can practice skills to mastery.

ACTIVE DISCOURSE AND MATH LITERACY

Throughout each lesson, students and teachers engage in whole class, small group, and peer discussions. Students develop communication skills and math literacy as they work with others to understand concepts, build skills, and tackle more complex problems.

DEPTH OF KNOWLEDGE (DOK)

Concepts, questions, and activities are carefully designed to meet the full range of Webb's task complexity. All practice and assessment items are tagged with DOK levels. Independent practice and chapter tests prepare students for the rigor of the Florida Standards Assessment End-of-Course as well as other complex tasks and projects.

4. Which of the following equations is not equivalent to the rest?

A. $y=\frac{1}{3}x-7$

B. $y+5=\frac{1}{3}(x-6)$

C. $x-3y=21$

[✓ D. $3x-y=21$]

(DOK 3)

ASSESSMENT

Each chapter and lesson focuses on specific learning outcomes with aligned formative and summative assessments. Items mirror those on high-stakes assessments with an emphasis on the Florida standards.

- Connect to Testing
- independent practice
- chapter-level and comprehensive FSA EOC practice
- chapter tests
- diagnostic tests
- digital assignments, quizzes, and tests
- teacher-built assignments and tests using an extensive item bank and online assignment builder

DIFFERENTIATION

Support for ELLs, ESEs, and advanced students helps all students succeed and be challenged.

- **Point-of-use vocabulary and math literacy support, remediation suggestions, and videos ensure content is accessible.**
- **Extension activities and a rich problem item bank ensure students remain challenged.**

ELL

Provide the following sentence frames to help students respond to the RECAP question.

Beginning/Intermediate:

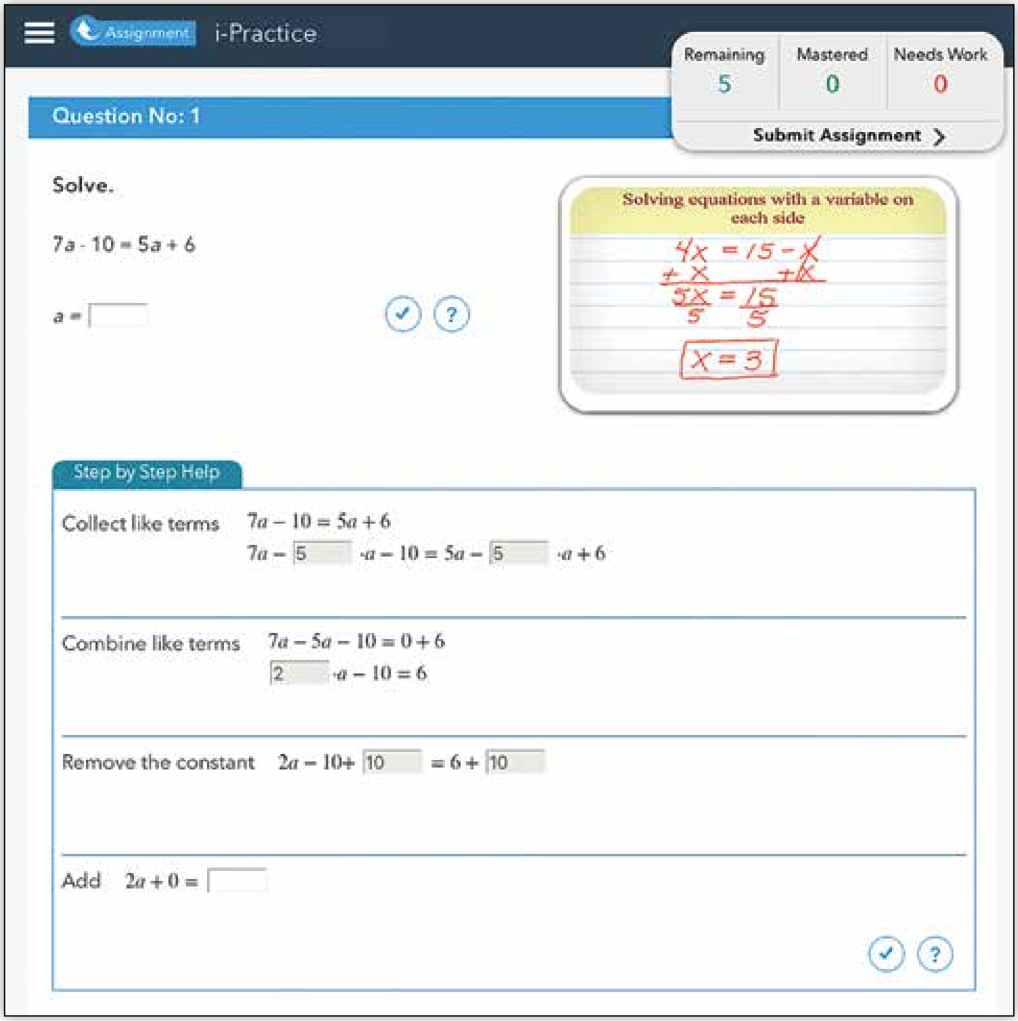
- *One way to find slope is* _______.
- *This way is best for* _______.
- *Another way to find slope is* _______.
- *This way is best for* _______.

Intermediate/Advanced:

- *One way to find slope is* _______.
- *This way is most appropriate for* _______.
- *Another way to find slope is* _______.
- *This way is most appropriate for* _______.

DIGITAL ASSIGNMENTS, QUIZZES, AND TESTS

- *i-Practice* personalized assignments
- point-of-use support (videos, hints, step-by-step help) and smart feedback
- pre-built diagnostic, chapter, and summative tests
- FSA EOC practice
- technology-enhanced items (equation editor, multi-select, drag and drop, matching, and much more)
- multiple attempts allowed for homework and *i-Practice*
- print capability for offline assignments



Question No: 1

Solve.

$7a - 10 = 5a + 6$

$a =$ ☐

Solving equations with a variable on each side

$4x = 15 - x$
$+x \quad +x$
$\frac{5x}{5} = \frac{15}{5}$
$\boxed{x = 3}$

Step by Step Help

Collect like terms $7a - 10 = 5a + 6$
$7a - \boxed{5} \cdot a - 10 = 5a - \boxed{5} \cdot a + 6$

Combine like terms $7a - 5a - 10 = 0 + 6$
$\boxed{2} \cdot a - 10 = 6$

Remove the constant $2a - 10 + \boxed{10} = 6 + \boxed{10}$

Add $2a + 0 =$ ☐

CLASS AND STUDENT ANALYTICS

- performance measures by skill and Florida Mathematics Standard
- extensive drill down capabilities (class, student, item)
- visual highlighting of strengths and performance gaps

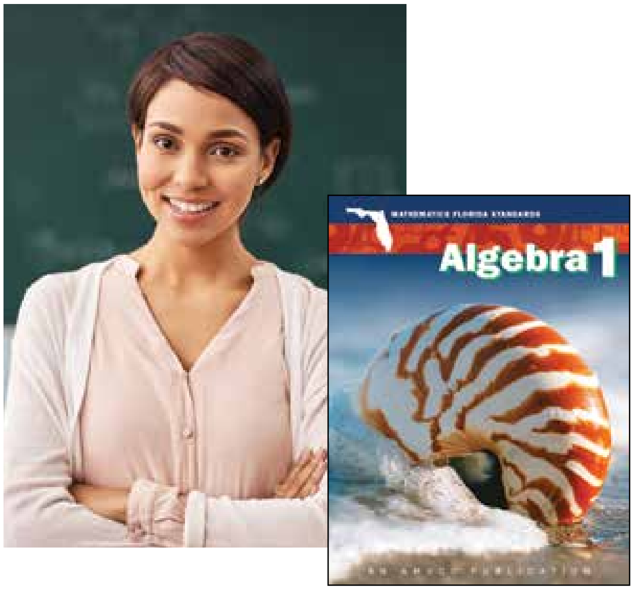
Standard	Performance	Problems	Average
A-APR 1	7 · 15	5	69%
A-APR 3	4 · 18	1	82%
A-APR 4	4 · 18	2	82%
A-CED 4	10 · 2 · 10	12	75%
A-SSE 2	4 · 17	7	83%
A-SSE 3	22	1	100%
F-BF 3	4 · 14 · 4	3	75%
[illegible]	6 · 6 · 10	1	0%
F-LE 3	9 · 5 · 8	6	66%

Average 77%
Excelling 10 students
Passing 6 students
Failing 6 students

LESSON PLANNING AND INSTRUCTIONAL SUPPORT

The teacher wraparound edition, available in both print and digital formats, provides planning guidance for each chapter and lesson, including

- Chapter Planner
- chapter goals with sample problems
- lesson prerequisites and suggested pacing
- discussion questions and suggested answers
- guided practice objectives with implementation ideas to encourage active discourse



OPEN EDUCATIONAL RESOURCES

No more searching the internet for lessons and videos! Open educational resources are provided at point of use.

- reviewed and vetted by math educators to ensure usefulness and appropriateness
- videos, interactive activities, and lesson-specific activities using programs such as **Desmos** and **GeoGebra**
- one-click access to all suggested resources via the digital teacher edition

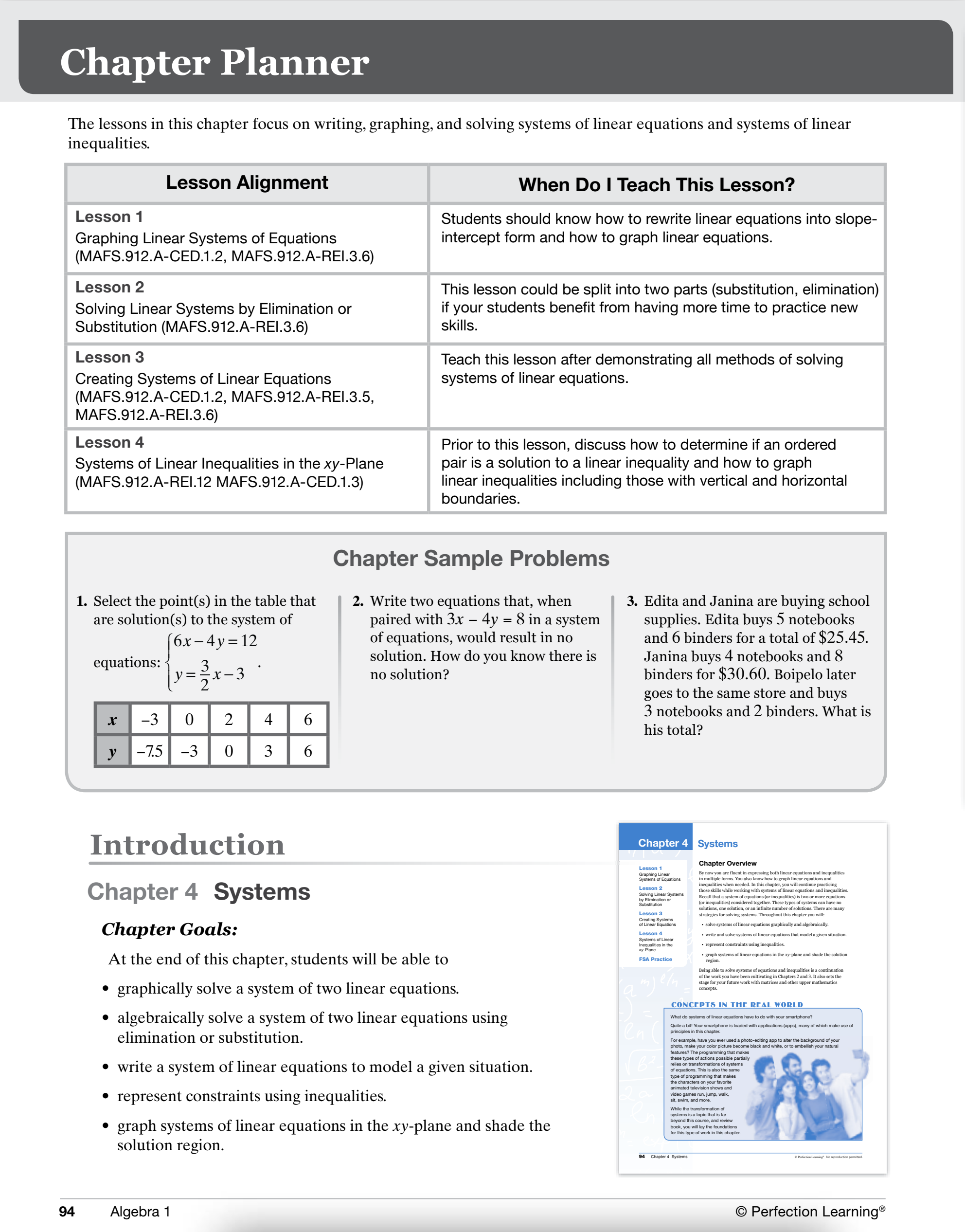
DIGITAL COURSE MANAGEMENT

Teachers can easily create, modify, and share digital assignments, quizzes, and tests.
In addition, teachers can

- automate grading with instant feedback
- customize assignments
- create individual, group, and whole class assignments
- review answers and modify grades
- modify assignments and due dates

CHAPTER INTRODUCTION

- **Chapter Planner** includes standards, lesson prerequisites, sequencing, and representative sample problems. Lesson pacing suggestions are also available.
- **Chapter Overview** and **Chapter Goals** clearly state the learning objectives.
- **Concepts in the Real World** provides students insight into how chapter concepts are applied outside the classroom.
- **Connect to Testing** engages students in chapter concepts using a FSA EOC-style example problem. Guided instruction and active discourse promotes student discovery of new concepts and their application.
- **Words to Know** introduces chapter concept vocabulary.



Chapter Planner

The lessons in this chapter focus on writing, graphing, and solving systems of linear equations and systems of linear inequalities.

Lesson Alignment	When Do I Teach This Lesson?
Lesson 1 Graphing Linear Systems of Equations (MAFS.912.A-CED.1.2, MAFS.912.A-REI.3.6)	Students should know how to rewrite linear equations into slope-intercept form and how to graph linear equations.
Lesson 2 Solving Linear Systems by Elimination or Substitution (MAFS.912.A-REI.3.6)	This lesson could be split into two parts (substitution, elimination) if your students benefit from having more time to practice new skills.
Lesson 3 Creating Systems of Linear Equations (MAFS.912.A-CED.1.2, MAFS.912.A-REI.3.5, MAFS.912.A-REI.3.6)	Teach this lesson after demonstrating all methods of solving systems of linear equations.
Lesson 4 Systems of Linear Inequalities in the *xy*-Plane (MAFS.912.A-REI.12 MAFS.912.A-CED.1.3)	Prior to this lesson, discuss how to determine if an ordered pair is a solution to a linear inequality and how to graph linear inequalities including those with vertical and horizontal boundaries.

Chapter Sample Problems

1. Select the point(s) in the table that are solution(s) to the system of equations: $\begin{cases} 6x-4y=12 \\ y=\frac{3}{2}x-3 \end{cases}$.

x	–3	0	2	4	6
y	–7.5	–3	0	3	6

2. Write two equations that, when paired with $3x - 4y = 8$ in a system of equations, would result in no solution. How do you know there is no solution?

3. Edita and Janina are buying school supplies. Edita buys 5 notebooks and 6 binders for a total of $25.45. Janina buys 4 notebooks and 8 binders for $30.60. Boipelo later goes to the same store and buys 3 notebooks and 2 binders. What is his total?

Introduction

Chapter 4 **Systems**

Chapter Goals:

At the end of this chapter, students will be able to

- graphically solve a system of two linear equations.
- algebraically solve a system of two linear equations using elimination or substitution.
- write a system of linear equations to model a given situation.
- represent constraints using inequalities.
- graph systems of linear equations in the *xy*-plane and shade the solution region.

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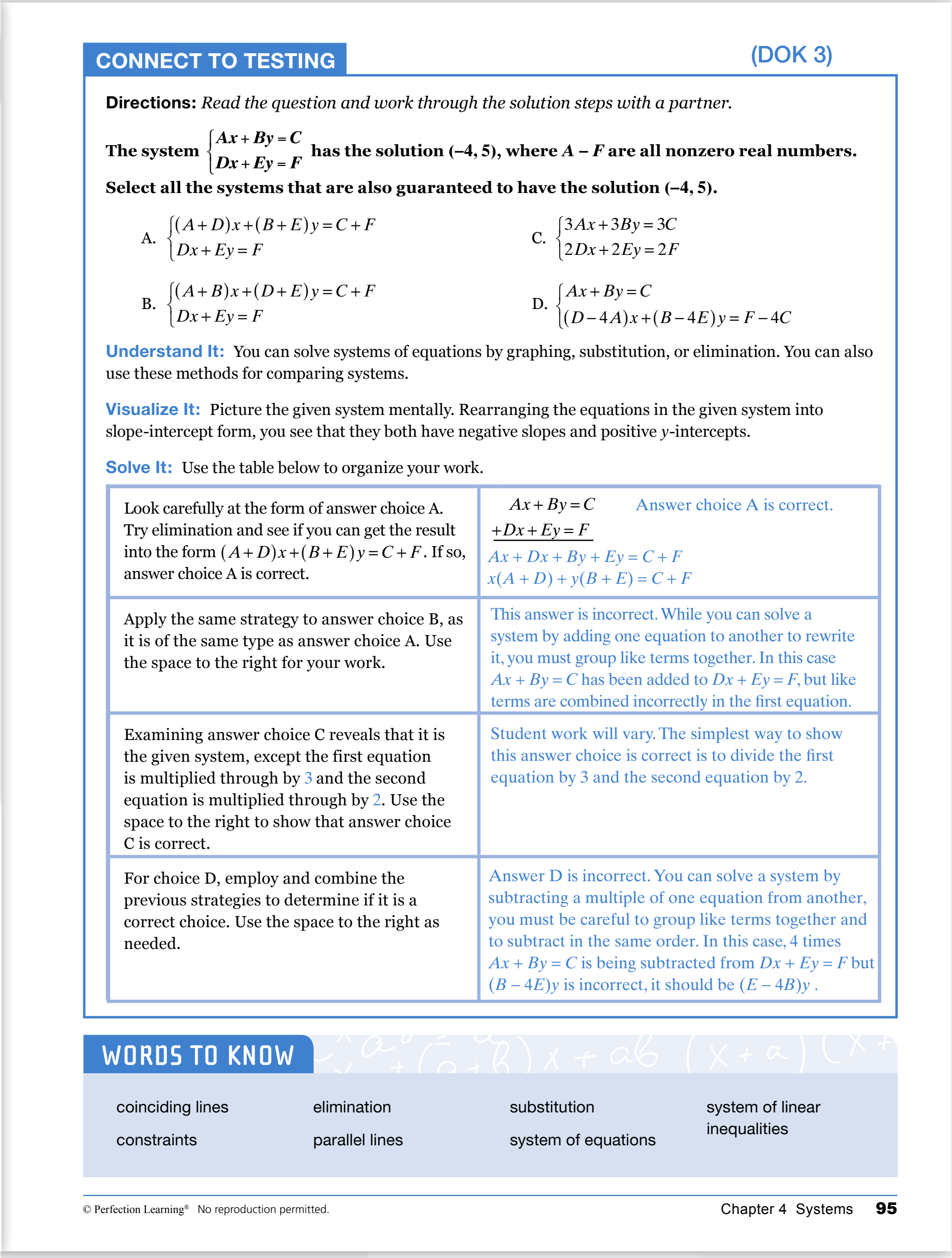
CONCEPTS IN THE REAL WORLD

What do systems of linear equations have to do with your smartphone?

Quite a bit! Your smartphone is loaded with applications (apps), many of which make use of principles in this chapter.

For example, have you ever used a photo-editing app to alter the background of your photo, make your color picture become black and white, or to embellish your natural features? The programming that makes these types of actions possible partially relies on transformations of systems of equations. This is also the same type of programming that makes the characters on your favorite animated television shows and video games run, jump, walk, sit, swim, and more.

While the transformation of systems is a topic that is far beyond this course, and review book, you will lay the foundations for this type of work in this chapter.



CONNECT TO TESTING

(DOK 3)

Directions: *Read the question and work through the solution steps with a partner.*

The system $\begin{cases} Ax+By=C \\ Dx+Ey=F \end{cases}$ has the solution (–4, 5), where *A* – *F* are all nonzero real numbers. Select all the systems that are also guaranteed to have the solution (–4, 5).

A. $\begin{cases} (A+D)x+(B+E)y=C+F \\ Dx+Ey=F \end{cases}$

B. $\begin{cases} (A+B)x+(D+E)y=C+F \\ Dx+Ey=F \end{cases}$

C. $\begin{cases} 3Ax+3By=3C \\ 2Dx+2Ey=2F \end{cases}$

D. $\begin{cases} Ax+By=C \\ (D-4A)x+(B-4E)y=F-4C \end{cases}$

Understand It: You can solve systems of equations by graphing, substitution, or elimination. You can also use these methods for comparing systems.

Visualize It: Picture the given system mentally. Rearranging the equations in the given system into slope-intercept form, you see that they both have negative slopes and positive *y*-intercepts.

Solve It: Use the table below to organize your work.

Look carefully at the form of answer choice A. Try elimination and see if you can get the result into the form $(A+D)x+(B+E)y=C+F$. If so, answer choice A is correct.	$Ax+By=C$ Answer choice A is correct. $\underline{+Dx+Ey=F}$ $Ax+Dx+By+Ey=C+F$ $x(A+D)+y(B+E)=C+F$
Apply the same strategy to answer choice B, as it is of the same type as answer choice A. Use the space to the right for your work.	This answer is incorrect. While you can solve a system by adding one equation to another to rewrite it, you must group like terms together. In this case $Ax+By=C$ has been added to $Dx+Ey=F$, but like terms are combined incorrectly in the first equation.
Examining answer choice C reveals that it is the given system, except the first equation is multiplied through by 3 and the second equation is multiplied through by 2. Use the space to the right to show that answer choice C is correct.	Student work will vary. The simplest way to show this answer choice is correct is to divide the first equation by 3 and the second equation by 2.
For choice D, employ and combine the previous strategies to determine if it is a correct choice. Use the space to the right as needed.	Answer D is incorrect. You can solve a system by subtracting a multiple of one equation from another, you must be careful to group like terms together and to subtract in the same order. In this case, 4 times $Ax+By=C$ is being subtracted from $Dx+Ey=F$ but $(B-4E)y$ is incorrect, it should be $(E-4B)y$.

WORDS TO KNOW

coinciding lines
constraints
elimination
parallel lines
substitution
system of equations
system of linear inequalities

CONNECT TO TESTING

Use these questions to help your students engage with the process of solving a simulated state test question.

1. **Before attempting the walk-through in the Solve It section, students should have a firm grasp of solving systems by elimination. Use the following problem as a remediation for students who need extra practice.**

   $2x+3y=20$

   $2x+y=4$

   The solution is (–2, 8).

2. **Ask students to make a plan to compare the systems in the answer choices to the system in the question. Prompt them to take the structure of the systems into account, if needed.**

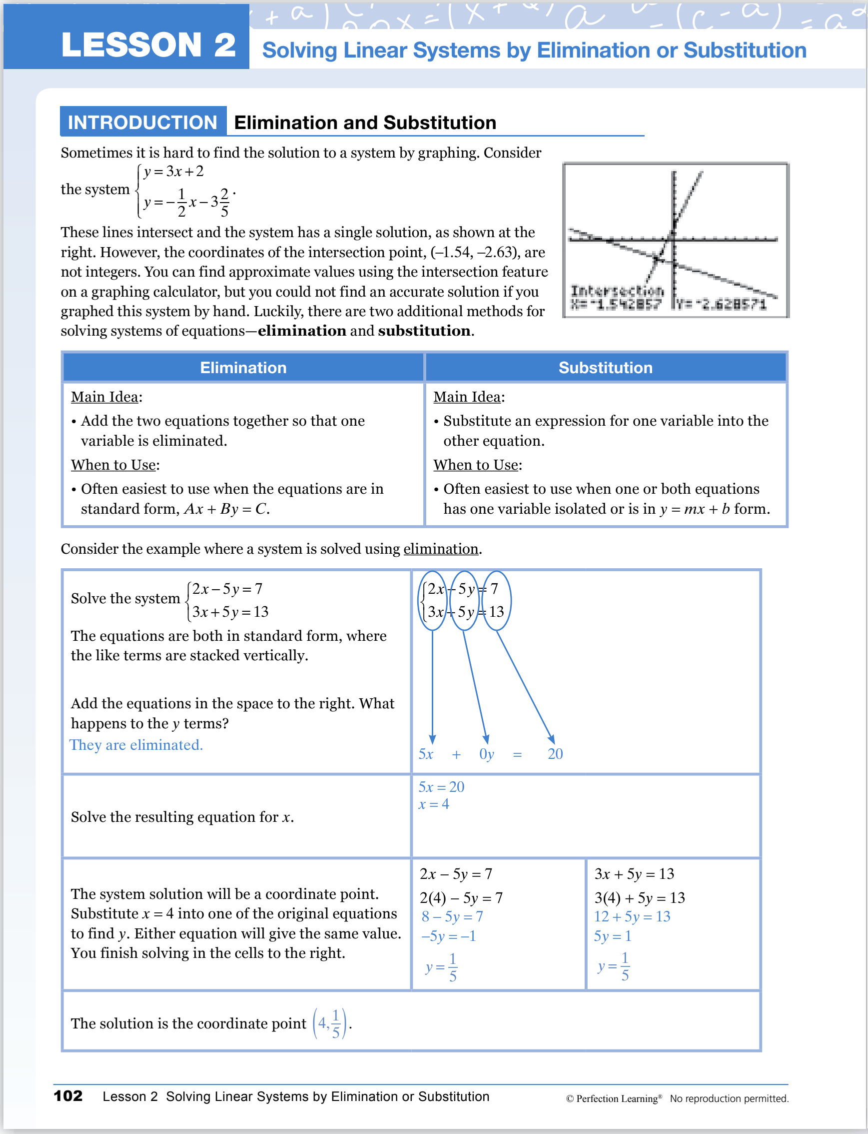
   Student plans will vary. One strategy to solve this problem is to rewrite all the systems so they are in the same form. For the given system, slope-intercept form is

   $$\begin{cases} y=-\dfrac{Ax}{B}+\dfrac{C}{B} \\ y=-\dfrac{Dx}{E}+\dfrac{F}{E} \end{cases}$$

   From this students can see that both equations have negative slopes with positive *y*-intercepts.

LESSON: INTRODUCTION

- Each lesson begins with short, direct instruction and transitions to guided instruction.
- Discussion questions and interactive activities prompt active discourse and student discovery.
- Extension activities promote visualization and application of concepts.
- ELL activities such as sentence frames, vocabulary notebooks, and graphic organizers help build math literacy.
- Videos give learners additional support.



LESSON 2 Solving Linear Systems by Elimination or Substitution

INTRODUCTION Elimination and Substitution

Sometimes it is hard to find the solution to a system by graphing. Consider the system $\begin{cases} y = 3x + 2 \\ y = -\frac{1}{2}x - 3\frac{2}{5} \end{cases}$.

These lines intersect and the system has a single solution, as shown at the right. However, the coordinates of the intersection point, (–1.54, –2.63), are not integers. You can find approximate values using the intersection feature on a graphing calculator, but you could not find an accurate solution if you graphed this system by hand. Luckily, there are two additional methods for solving systems of equations—**elimination** and **substitution**.

Elimination	Substitution
Main Idea: • Add the two equations together so that one variable is eliminated. When to Use: • Often easiest to use when the equations are in standard form, $Ax + By = C$.	Main Idea: • Substitute an expression for one variable into the other equation. When to Use: • Often easiest to use when one or both equations has one variable isolated or is in $y = mx + b$ form.

Consider the example where a system is solved using elimination.

Solve the system $\begin{cases} 2x - 5y = 7 \\ 3x + 5y = 13 \end{cases}$ The equations are both in standard form, where the like terms are stacked vertically. Add the equations in the space to the right. What happens to the y terms? They are eliminated.	$\begin{cases} 2x - 5y = 7 \\ 3x + 5y = 13 \end{cases}$ $5x \quad + \quad 0y \quad = \quad 20$	
Solve the resulting equation for x.	$5x = 20$ $x = 4$	
The system solution will be a coordinate point. Substitute $x = 4$ into one of the original equations to find y. Either equation will give the same value. You finish solving in the cells to the right.	$2x - 5y = 7$ $2(4) - 5y = 7$ $8 - 5y = 7$ $-5y = -1$ $y = \frac{1}{5}$	$3x + 5y = 13$ $3(4) + 5y = 13$ $12 + 5y = 13$ $5y = 1$ $y = \frac{1}{5}$
The solution is the coordinate point $\left(4, \frac{1}{5}\right)$.		

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INTRODUCTION

How do you determine when to use substitution and when to use elimination to solve a system of equations?

Student answers will vary. One possible answer: Examine how the system is presented. If both equations are in slope-intercept form and don't have any fractions or decimals, I would use the substitution method. I would also use this method if one of the equations was solved for x or y. If both equations were in standard form, I would use the elimination method.

How does solving by elimination compare with solving by the substitution method?

The elimination method is used when both equations are in standard form. In this method you eliminate either the x or the y variable by first adding the equations. In the substitution method, you substitute one equation into the other in order to solve for one of the variables.

Why is it sometimes important to use the elimination or substitution method rather than the graphing method to solve a system of equations?

It is not always easy to graph systems of equations accurately by hand. Additionally, if the solution is fractional, it can be difficult to read from the graph.

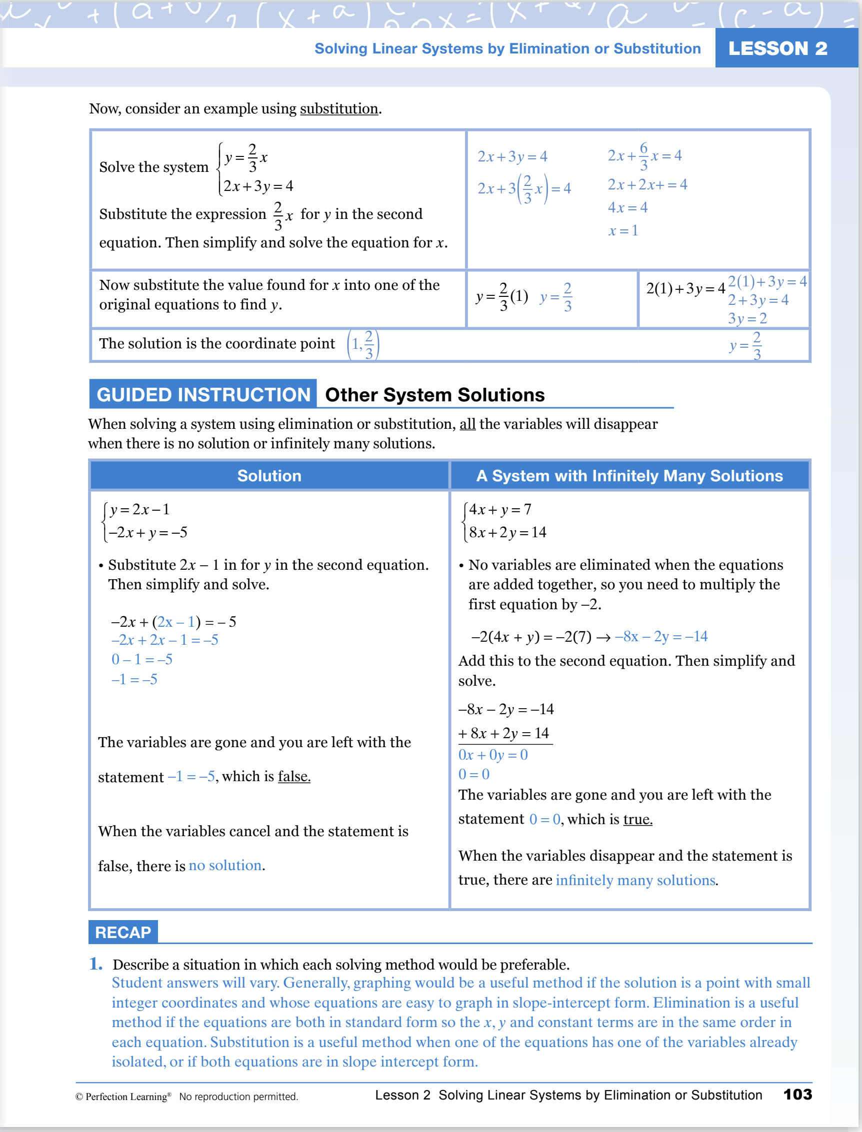
EXTENSION ACTIVITIES

Activity

Solving Linear Systems Algebraically

In this activity, students will solve linear systems algebraically and then drag the solution point to the intersection, if any, of the graph. (Approximately 20 minutes)

https://www.geogebra.org/m/NHYqDPnS



Now, consider an example using substitution.

Solve the system $\begin{cases} y=\frac{2}{3}x \\ 2x+3y=4 \end{cases}$ Substitute the expression $\frac{2}{3}x$ for y in the second equation. Then simplify and solve the equation for x.	$2x+3y=4$ $2x+3\left(\frac{2}{3}x\right)=4$	$2x+\frac{6}{3}x=4$ $2x+2x+=4$ $4x=4$ $x=1$
Now substitute the value found for x into one of the original equations to find y.	$y=\frac{2}{3}(1)$ $y=\frac{2}{3}$	$2(1)+3y=4$ $2(1)+3y=4$ $2+3y=4$ $3y=2$
The solution is the coordinate point $\left(1,\frac{2}{3}\right)$		$y=\frac{2}{3}$

GUIDED INSTRUCTION Other System Solutions

When solving a system using elimination or substitution, all the variables will disappear when there is no solution or infinitely many solutions.

Solution	A System with Infinitely Many Solutions
$\begin{cases} y=2x-1 \\ -2x+y=-5 \end{cases}$ • Substitute $2x-1$ in for y in the second equation. Then simplify and solve. $-2x+(2x-1)=-5$ $-2x+2x-1=-5$ $0-1=-5$ $-1=-5$ The variables are gone and you are left with the statement $-1=-5$, which is false. When the variables cancel and the statement is false, there is no solution.	$\begin{cases} 4x+y=7 \\ 8x+2y=14 \end{cases}$ • No variables are eliminated when the equations are added together, so you need to multiply the first equation by –2. $-2(4x+y)=-2(7) \rightarrow -8x-2y=-14$ Add this to the second equation. Then simplify and solve. $-8x-2y=-14$ $+\ 8x+2y=14$ $0x+0y=0$ $0=0$ The variables are gone and you are left with the statement $0=0$, which is true. When the variables disappear and the statement is true, there are infinitely many solutions.

RECAP

1. Describe a situation in which each solving method would be preferable.
Student answers will vary. Generally, graphing would be a useful method if the solution is a point with small integer coordinates and whose equations are easy to graph in slope-intercept form. Elimination is a useful method if the equations are both in standard form so the x, y and constant terms are in the same order in each equation. Substitution is a useful method when one of the equations has one of the variables already isolated, or if both equations are in slope intercept form.

Instruction

ELL VOCABULARY

- Ask students to record the following academic vocabulary and definitions in their Vocabulary Notebook: *additional** (another), *stacked* (placed on top of each other), *either* (one or another), *neither* (not one or the other), *description* (a statement/ sentence that tells what something is like), *paired* (joined in groups of two), *individually* (one at a time, alone), *exact* (fully or completely accurate, correct).

ELL

Provide the following sentence frames to help students respond to the RECAP question.

Beginning/Intermediate:

- *Graphing is better when* ____.
- *Elimination is better when* ____.
- *Substitution is better when* ____.

Video

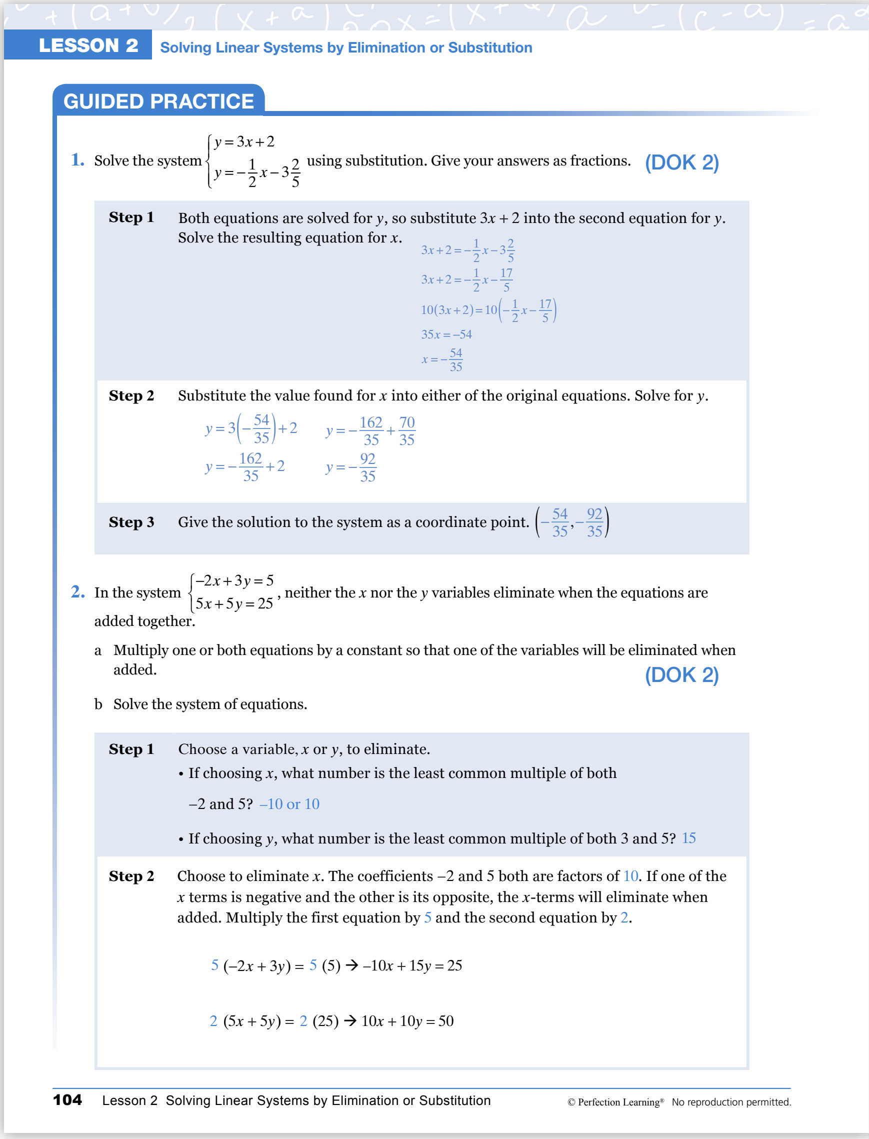
Solving Systems of Equations Using Elimination By Addition

Explains how to solve systems of linear equations using the elimination method. (Length: 9:59)

https://www.youtube.com/watch?v=ej25myhYcSg

LESSON: GUIDED PRACTICE

- Each activity has a clearly stated purpose and stepped-out support.
- Scaffolded practice provides opportunities for small group and peer-to-peer discussions.
- Remediation activities provide reteaching and reinforcement opportunities.
- All guided practice activities include DOK levels.



LESSON 2 Solving Linear Systems by Elimination or Substitution

GUIDED PRACTICE

1. Solve the system $\begin{cases} y = 3x + 2 \\ y = -\frac{1}{2}x - 3\frac{2}{5} \end{cases}$ using substitution. Give your answers as fractions. (DOK 2)

Step 1 Both equations are solved for y, so substitute $3x + 2$ into the second equation for y. Solve the resulting equation for x.

$$3x+2=-\frac{1}{2}x-3\frac{2}{5}$$
$$3x+2=-\frac{1}{2}x-\frac{17}{5}$$
$$10(3x+2)=10\left(-\frac{1}{2}x-\frac{17}{5}\right)$$
$$35x=-54$$
$$x=-\frac{54}{35}$$

Step 2 Substitute the value found for x into either of the original equations. Solve for y.

$$y=3\left(-\frac{54}{35}\right)+2 \qquad y=-\frac{162}{35}+\frac{70}{35}$$
$$y=-\frac{162}{35}+2 \qquad y=-\frac{92}{35}$$

Step 3 Give the solution to the system as a coordinate point. $\left(-\frac{54}{35},-\frac{92}{35}\right)$

2. In the system $\begin{cases} -2x+3y=5 \\ 5x+5y=25 \end{cases}$, neither the x nor the y variables eliminate when the equations are added together.

a Multiply one or both equations by a constant so that one of the variables will be eliminated when added.

(DOK 2)

b Solve the system of equations.

Step 1 Choose a variable, x or y, to eliminate.

- If choosing x, what number is the least common multiple of both −2 and 5? −10 or 10
- If choosing y, what number is the least common multiple of both 3 and 5? 15

Step 2 Choose to eliminate x. The coefficients −2 and 5 both are factors of 10. If one of the x terms is negative and the other is its opposite, the x-terms will eliminate when added. Multiply the first equation by 5 and the second equation by 2.

$$5\,(-2x + 3y) = 5\,(5) \rightarrow -10x + 15y = 25$$

$$2\,(5x + 5y) = 2\,(25) \rightarrow 10x + 10y = 50$$

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GUIDED PRACTICE

Question 2 Remediation: Table Activity

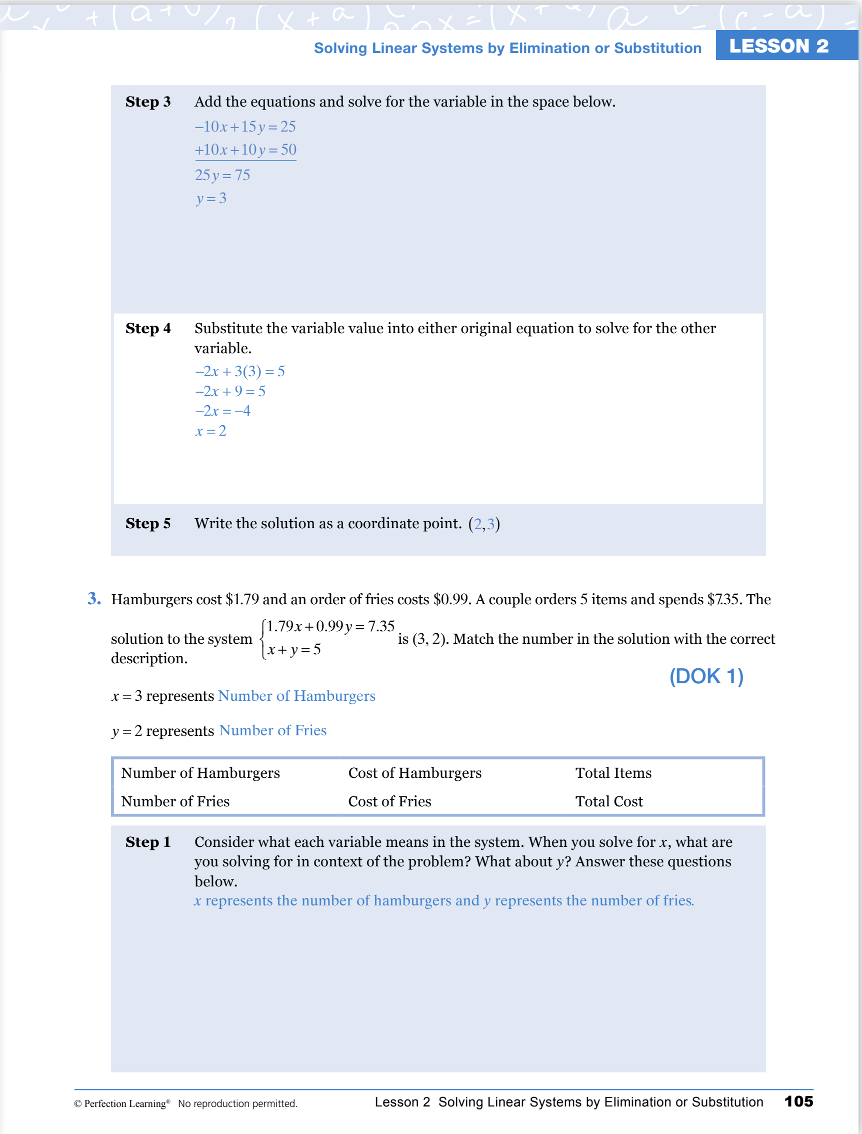
Purpose

This activity gives students more practice with solving by elimination.

Implementation

- Copy the table below, without answers, onto the board, or display using projection equipment with the answers covered.
- Have the students complete the chart individually or in pairs, placing a check mark in the column "Elimination" or "Substitution" to show which method would be best for solving the given system.
- Students can solve the systems or you can lead the class in solving each of them, discussing why certain methods are preferable.

System	Elimination	Substitution	Solution
$\begin{cases} 2x+3y=12 \\ 2x-3y=-6 \end{cases}$	✓		$\left(\frac{3}{2},3\right)$
$\begin{cases} 6x-2y=14 \\ y=-\frac{1}{2}x \end{cases}$		✓	(2,–1)
$\begin{cases} 5x+3y=14 \\ 3x-3y=18 \end{cases}$	✓		(4,–2)
$\begin{cases} 4x-3y=19 \\ 5x+3y=17 \end{cases}$	✓		(4,–1)



Step 3 Add the equations and solve for the variable in the space below.

$-10x + 15y = 25$

$+10x + 10y = 50$

$25y = 75$

$y = 3$

Step 4 Substitute the variable value into either original equation to solve for the other variable.

$-2x + 3(3) = 5$

$-2x + 9 = 5$

$-2x = -4$

$x = 2$

Step 5 Write the solution as a coordinate point. (2,3)

3. Hamburgers cost $1.79 and an order of fries costs $0.99. A couple orders 5 items and spends $7.35. The solution to the system $\begin{cases} 1.79x + 0.99y = 7.35 \\ x + y = 5 \end{cases}$ is (3, 2). Match the number in the solution with the correct description.

(DOK 1)

$x = 3$ represents Number of Hamburgers

$y = 2$ represents Number of Fries

Number of Hamburgers	Cost of Hamburgers	Total Items
Number of Fries	Cost of Fries	Total Cost

Step 1 Consider what each variable means in the system. When you solve for x, what are you solving for in context of the problem? What about y? Answer these questions below.

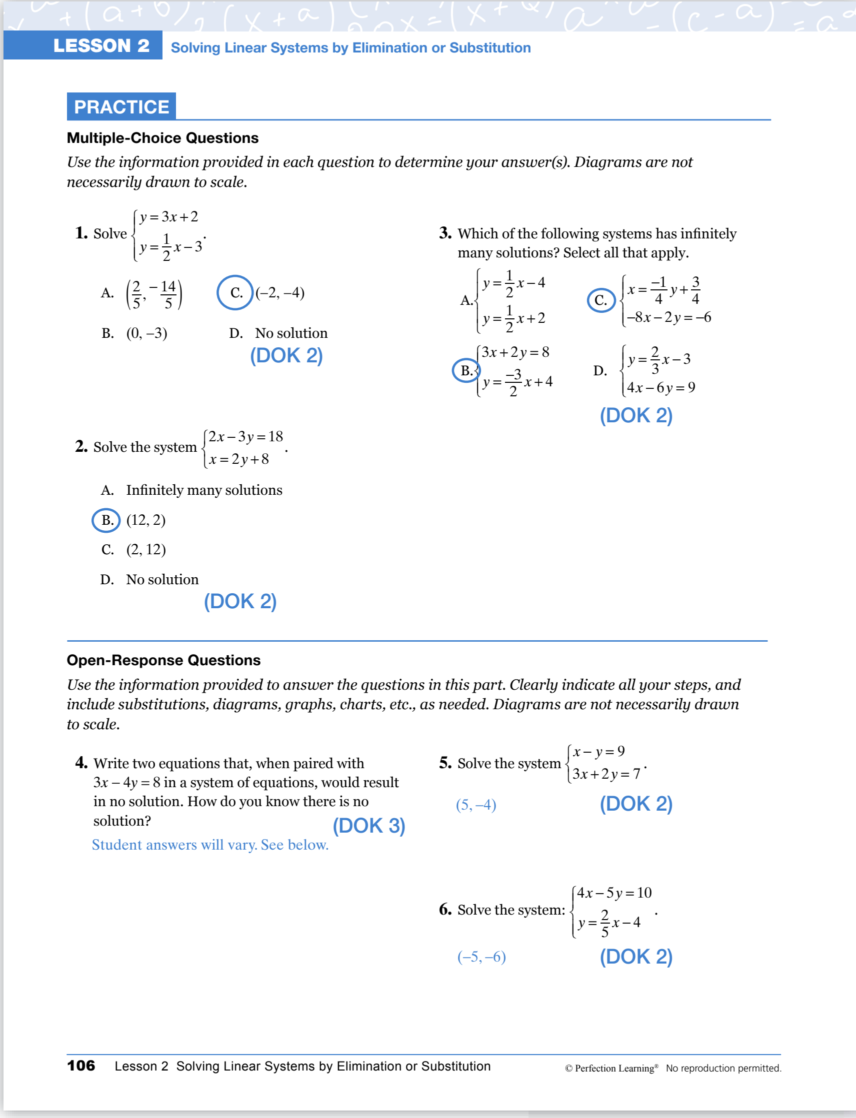
x represents the number of hamburgers and y represents the number of fries.

ELL VOCABULARY

- For Guided Practice #3, use images or sketches to explain the words: *hamburgers, fries*.

LESSON: PRACTICE

- Practice activities cover a range of DOK levels.
- QR codes link to instructional videos supporting the assignment.
- Full solution explanations are provided at point of use.



LESSON 2 Solving Linear Systems by Elimination or Substitution

PRACTICE

Multiple-Choice Questions

Use the information provided in each question to determine your answer(s). Diagrams are not necessarily drawn to scale.

1. Solve $\begin{cases} y=3x+2 \\ y=\frac{1}{2}x-3 \end{cases}$.

A. $\left(\frac{2}{5}, -\frac{14}{5}\right)$ [✓ C.] $(-2, -4)$

B. $(0, -3)$ D. No solution

(DOK 2)

2. Solve the system $\begin{cases} 2x-3y=18 \\ x=2y+8 \end{cases}$.

A. Infinitely many solutions

[✓ B.] (12, 2)

C. (2, 12)

D. No solution

(DOK 2)

3. Which of the following systems has infinitely many solutions? Select all that apply.

A. $\begin{cases} y=\frac{1}{2}x-4 \\ y=\frac{1}{2}x+2 \end{cases}$ [✓ C.] $\begin{cases} x=\frac{-1}{4}y+\frac{3}{4} \\ -8x-2y=-6 \end{cases}$

[✓ B.] $\begin{cases} 3x+2y=8 \\ y=\frac{-3}{2}x+4 \end{cases}$ D. $\begin{cases} y=\frac{2}{3}x-3 \\ 4x-6y=9 \end{cases}$

(DOK 2)

Open-Response Questions

Use the information provided to answer the questions in this part. Clearly indicate all your steps, and include substitutions, diagrams, graphs, charts, etc., as needed. Diagrams are not necessarily drawn to scale.

4. Write two equations that, when paired with $3x - 4y = 8$ in a system of equations, would result in no solution. How do you know there is no solution? (DOK 3)

Student answers will vary. See below.

5. Solve the system $\begin{cases} x-y=9 \\ 3x+2y=7 \end{cases}$.

$(5, -4)$ (DOK 2)

6. Solve the system: $\begin{cases} 4x-5y=10 \\ y=\frac{2}{5}x-4 \end{cases}$.

$(-5, -6)$ (DOK 2)

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2. Use the substitution method. Solution steps are shown.

$$2(2y+8)-3y=18$$
$$4y+16-3y=18$$
$$y=2$$

Then $x = 2(2) + 8 = 12$.

3. Eliminate answer choice A as the lines are parallel. Check answer choice B:

$$3x+2\left(\frac{-3}{2}x+4\right)=8$$
$$8=8$$

A true statement results so this system has infinitely many solutions. Do the same for answer choice C:

$$-8\left(\frac{-1}{4}y+\frac{3}{4}\right)-2y=-6$$
$$-6=-6$$

Again, this system has infinitely many solutions.

For answer choice D,

$$4x-6\left(\frac{2}{3}x-3\right)=9$$
$$18\neq 9$$

This is a false statement, so this system has no solution and is not a correct choice.

4. Rewrite the equation $3x - 4y = 8$ in slope-intercept form: $y=\frac{3}{4}x+2$. Any equation with the same slope but different y-intercept will have no solution when paired with it in a system.

5. Use the elimination method. Solution steps are shown.

$$\begin{array}{rl} 2[x-y=9]\rightarrow & 2x-2y=18 \\ +3x+2y=7\rightarrow & +3x+2y=7 \\ \hline & 5x=25 \\ & x=5 \end{array}$$

Solve for y.

$$5-y=9$$
$$y=-4$$

6. Use the substitution method. Solution steps are shown.

$$4x-5\left(\frac{2}{5}x-4\right)=10$$
$$2x=-10$$
$$x=-5$$

Solve for y.

$$y=\frac{2}{5}(-5)-5$$
$$y=-6$$

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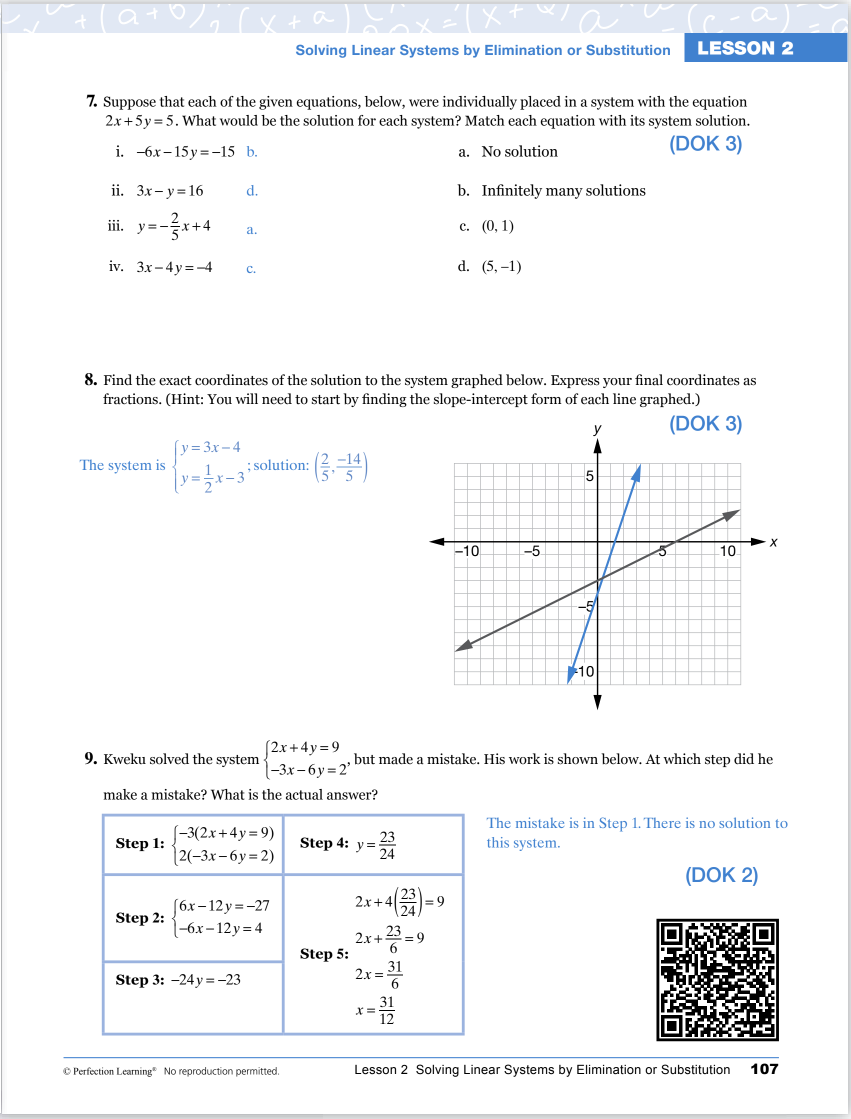

Solving Linear Systems by Elimination or Substitution **LESSON 2**

7. Suppose that each of the given equations, below, were individually placed in a system with the equation $2x+5y=5$. What would be the solution for each system? Match each equation with its system solution. (DOK 3)

i.	$-6x-15y=-15$ b.	a.	No solution
ii.	$3x-y=16$ d.	b.	Infinitely many solutions
iii.	$y=-\frac{2}{5}x+4$ a.	c.	(0, 1)
iv.	$3x-4y=-4$ c.	d.	(5, –1)

8. Find the exact coordinates of the solution to the system graphed below. Express your final coordinates as fractions. (Hint: You will need to start by finding the slope-intercept form of each line graphed.) (DOK 3)

The system is $\begin{cases} y=3x-4 \\ y=\frac{1}{2}x-3 \end{cases}$; solution: $\left(\frac{2}{5},\frac{-14}{5}\right)$

9. Kweku solved the system $\begin{cases} 2x+4y=9 \\ -3x-6y=2 \end{cases}$, but made a mistake. His work is shown below. At which step did he make a mistake? What is the actual answer?

Step 1: $\begin{cases} -3(2x+4y=9) \\ 2(-3x-6y=2) \end{cases}$	**Step 4:** $y=\frac{23}{24}$
Step 2: $\begin{cases} 6x-12y=-27 \\ -6x-12y=4 \end{cases}$	**Step 5:** $2x+4\left(\frac{23}{24}\right)=9$ $2x+\frac{23}{6}=9$ $2x=\frac{31}{6}$ $x=\frac{31}{12}$
Step 3: $-24y=-23$	

The mistake is in Step 1. There is no solution to this system.

(DOK 2)

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Review

7. Consider each potential system.

$\begin{cases} 2x+5y=5 \\ -6x-15y=-15 \end{cases}$	$\begin{cases} 2x+5y=5 \\ 3x-y=16 \end{cases}$
These equations are the same; the second is equivalent to the first equation multiplied through by a factor of –3.	Use elimination to solve. $2x+5y=5$ $15-5y=80$ $17x=85$ $x=5$ There is only one answer choice with an *x*-value of 5.
Infinitely Many Solutions (b)	(5, -1) (d)
$\begin{cases} 2x+5y=5 \\ y=-\frac{2}{5}x+4 \end{cases}$	$\begin{cases} 2x+5y=5 \\ 3x-4y=-4 \end{cases}$
Use substitution to solve. $2x+5\left(-\frac{2}{5}x+4\right)=5$ $2x-2x+20=5$ $20\neq 5$ This is a false statement.	Use elimination to solve. Multiply the first equation by –2 and the second by 3. Then $-6x+8y=8$ $6x+15y=15$ $23y=23$ $y=1$ There is only one answer choice with a *y*-value of 1.
No Solution (a)	(0, 1) (c)

8. Write the system using the *y*-intercepts and a second point on each line. The system is

$$\begin{cases} y=3x-4 \\ y=\frac{1}{2}x-3 \end{cases}.$$

Solve by substitution.

$$\frac{1}{2}x-3=3x-4$$

$$x=\frac{2}{5}$$

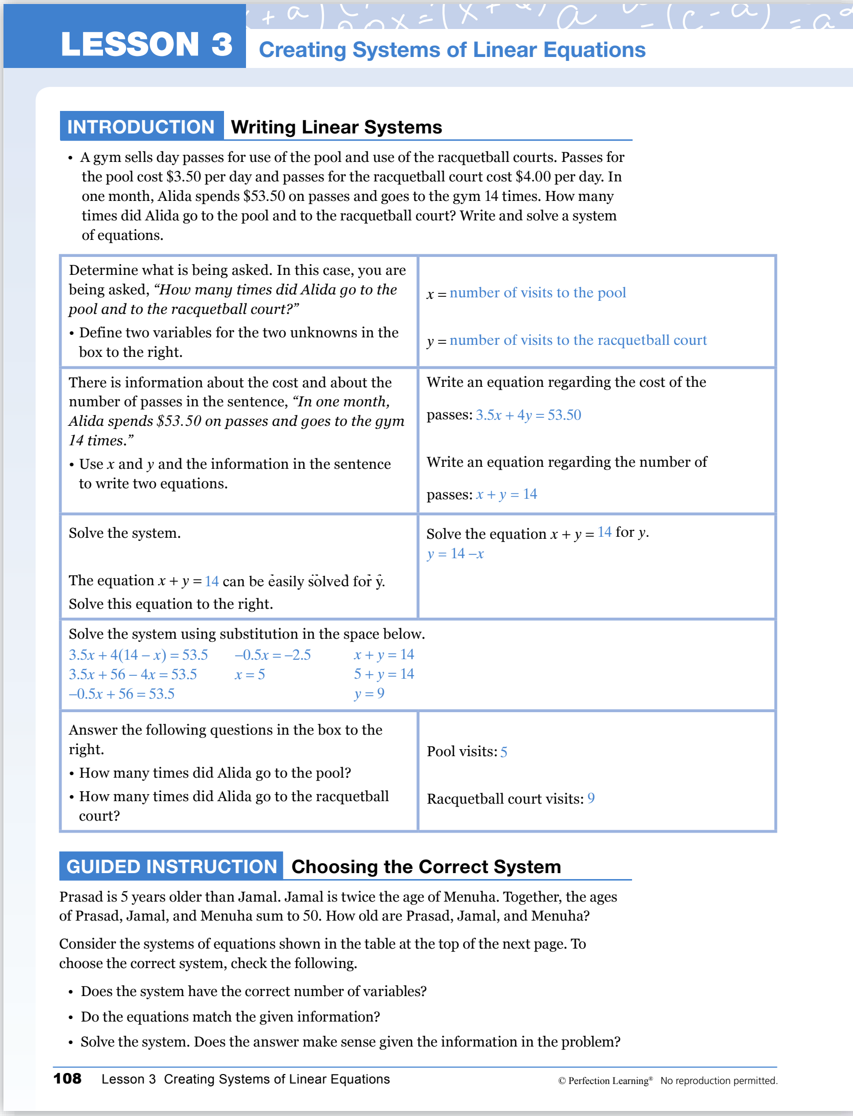
Substitute this value for *x* in either equation and solve for *y*:

$$y=3\left(\frac{2}{5}\right)-4=\frac{-14}{5}.$$

9. If Kweku wanted to eliminate the *x*-variable, he should have multiplied the equations by +3 and +2, since the *x* terms already had opposite signs. If he had, the system would have become $\begin{cases} 6x+12y=27 \\ -6x-12y=4 \end{cases}$. Summing these equations eliminates both *x* and *y*, resulting in $0=31$, which is not true. The system has no solution.

OPEN EDUCATIONAL RESOURCES

- Save time with carefully curated open resources.
- Open resources include interactive activities, simulations, videos, and digital tools.
- Time estimates and activity synopses are provided to assist in planning and usage.



LESSON 3 Creating Systems of Linear Equations

INTRODUCTION Writing Linear Systems

- A gym sells day passes for use of the pool and use of the racquetball courts. Passes for the pool cost \$3.50 per day and passes for the racquetball court cost \$4.00 per day. In one month, Alida spends \$53.50 on passes and goes to the gym 14 times. How many times did Alida go to the pool and to the racquetball court? Write and solve a system of equations.

Determine what is being asked. In this case, you are being asked, *"How many times did Alida go to the pool and to the racquetball court?"* • Define two variables for the two unknowns in the box to the right.	x = number of visits to the pool y = number of visits to the racquetball court
There is information about the cost and about the number of passes in the sentence, *"In one month, Alida spends \$53.50 on passes and goes to the gym 14 times."* • Use x and y and the information in the sentence to write two equations.	Write an equation regarding the cost of the passes: $3.5x + 4y = 53.50$ Write an equation regarding the number of passes: $x + y = 14$
Solve the system. The equation $x + y = 14$ can be easily solved for y. Solve this equation to the right.	Solve the equation $x + y = 14$ for y. $y = 14 - x$
Solve the system using substitution in the space below. $3.5x + 4(14 - x) = 53.5$ $-0.5x = -2.5$ $x + y = 14$ $3.5x + 56 - 4x = 53.5$ $x = 5$ $5 + y = 14$ $-0.5x + 56 = 53.5$ $y = 9$	
Answer the following questions in the box to the right. • How many times did Alida go to the pool? • How many times did Alida go to the racquetball court?	Pool visits: 5 Racquetball court visits: 9

GUIDED INSTRUCTION Choosing the Correct System

Prasad is 5 years older than Jamal. Jamal is twice the age of Menuha. Together, the ages of Prasad, Jamal, and Menuha sum to 50. How old are Prasad, Jamal, and Menuha?

Consider the systems of equations shown in the table at the top of the next page. To choose the correct system, check the following.

- Does the system have the correct number of variables?
- Do the equations match the given information?
- Solve the system. Does the answer make sense given the information in the problem?

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INTRODUCTION

Give an example of a problem that could be solved using a system of linear equations.

Student answers will vary. Any situation that relates two variables using two linear equations is appropriate.

Explain how to write a system of equations from a word problem.

Student answers will vary. One possible answer: To write a system of equations from a word problem, I must first determine how many variables are in the problem. The number of unknown variables tells me how many equations I will need in order to solve my unknowns. Then I need to look at the context for clues, breaking down the problem sentence by sentence.

GUIDED INSTRUCTION

How can you determine if two given systems of equations are equivalent?

Student answers will vary. One possible answer: I can determine if two systems of equations are equivalent by transforming each equation into slope-intercept form. If they are equivalent, the equations will be the same for both systems.

EXTENSION ACTIVITIES

Activities

Linear Systems: Gym Membership

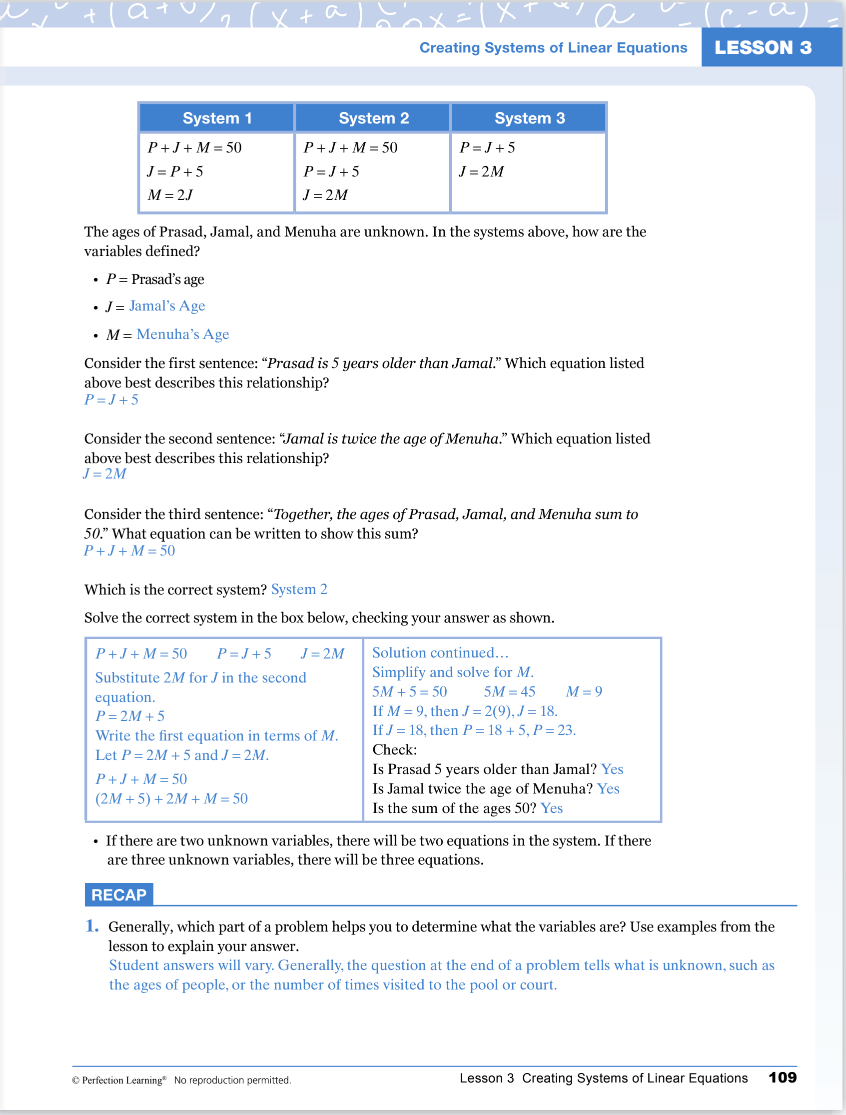
This is an extension you can use after students are comfortable creating linear equations. (Approximately 40 minutes)

https://teacher.desmos.com/activitybuilder/custom/561d6a790784861e06c3a6dc#

Systems of Linear Equations

Here students will write systems of equations from word problems and then graph the equations on the *xy*-plane. (Approximately 20 minutes)

https://www.geogebra.org/m/Vtd7Xaas



System 1	System 2	System 3
$P + J + M = 50$ $J = P + 5$ $M = 2J$	$P + J + M = 50$ $P = J + 5$ $J = 2M$	$P = J + 5$ $J = 2M$

The ages of Prasad, Jamal, and Menuha are unknown. In the systems above, how are the variables defined?

- P = Prasad's age
- J = Jamal's Age
- M = Menuha's Age

Consider the first sentence: "*Prasad is 5 years older than Jamal.*" Which equation listed above best describes this relationship?
$P = J + 5$

Consider the second sentence: "*Jamal is twice the age of Menuha.*" Which equation listed above best describes this relationship?
$J = 2M$

Consider the third sentence: "*Together, the ages of Prasad, Jamal, and Menuha sum to 50.*" What equation can be written to show this sum?
$P + J + M = 50$

Which is the correct system? System 2

Solve the correct system in the box below, checking your answer as shown.

$P + J + M = 50$ $P = J + 5$ $J = 2M$
Substitute $2M$ for J in the second equation.
$P = 2M + 5$
Write the first equation in terms of M.
Let $P = 2M + 5$ and $J = 2M$.
$P + J + M = 50$
$(2M + 5) + 2M + M = 50$

Solution continued…
Simplify and solve for M.
$5M + 5 = 50$ $5M = 45$ $M = 9$
If $M = 9$, then $J = 2(9)$, $J = 18$.
If $J = 18$, then $P = 18 + 5$, $P = 23$.
Check:
Is Prasad 5 years older than Jamal? Yes
Is Jamal twice the age of Menuha? Yes
Is the sum of the ages 50? Yes

- If there are two unknown variables, there will be two equations in the system. If there are three unknown variables, there will be three equations.

RECAP

1. Generally, which part of a problem helps you to determine what the variables are? Use examples from the lesson to explain your answer.
Student answers will vary. Generally, the question at the end of a problem tells what is unknown, such as the ages of people, or the number of times visited to the pool or court.

Video

Systems of Linear Equations in Two Variables

Reiterates the importance of the intersection point. Walks students through a problem and solution. (Length: 6:37)

https://www.youtube.com/watch?v=75m60SxFfJg&t=190s

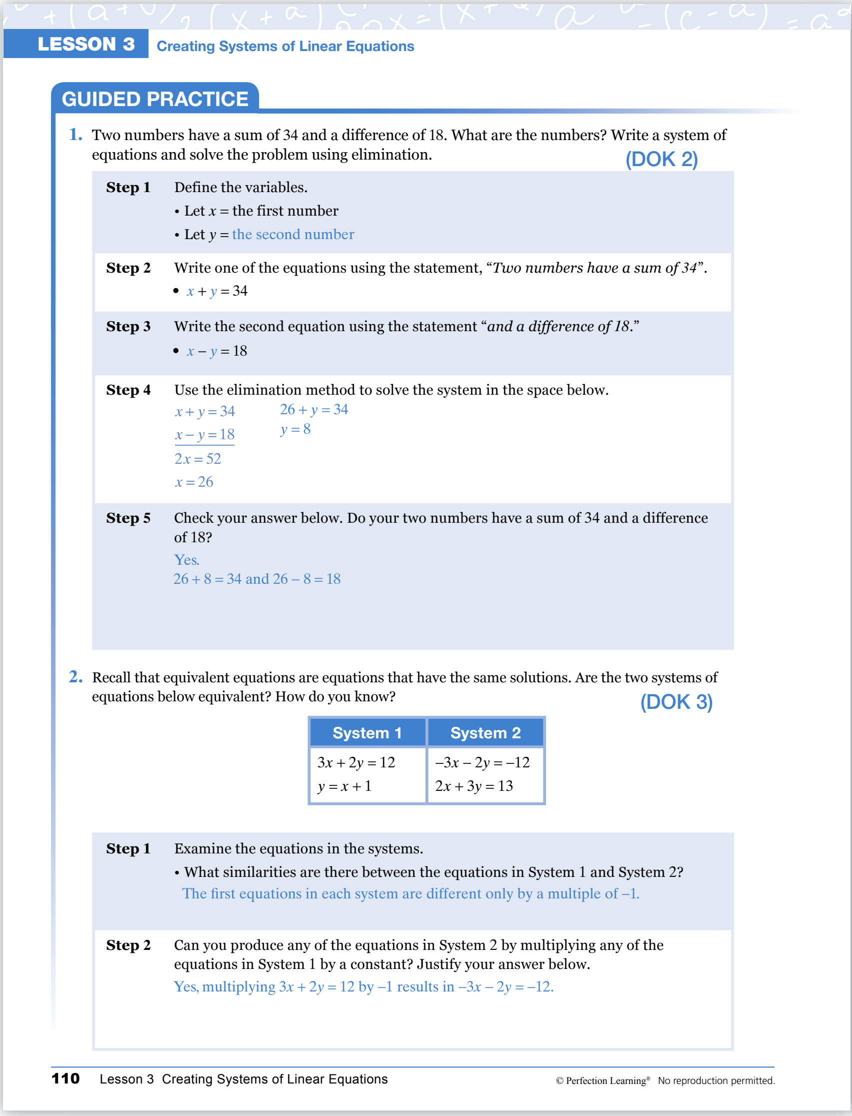
Instruction

ELL VOCABULARY

- For the introduction problem, use images or sketches to explain the words: *gym, pool, racquetball, passes*.
- Ask students to record the following academic vocabulary and definitions in their Vocabulary Notebook: *real world* (in life, not just in the classroom), *make sense* (to be clear or correct), *justify** (give reasons for), *verbal* (with words), *corresponding** (matching, being the same as), *interpret** (to explain, to figure out), *exceed** (to be greater or more than, to go over), *state* (to say).
- Have students review the following math vocabulary from Chapter 4: Lesson 1: *system of equations** Lesson 2: *substitution**, *elimination** Chapter 2: Lesson 1: *coordinates** Chapter 1: Lesson 1: *sum** Lesson 2: *equation**, *variable**, *multiplying**, *equivalent* Lesson 4: *solution**.

VISUALIZATION AND MODELING

- Modeling and visualization activities help students deepen understanding.
- Comparing models promotes discovery and stimulates active discourse.



LESSON 3 Creating Systems of Linear Equations

GUIDED PRACTICE

1. Two numbers have a sum of 34 and a difference of 18. What are the numbers? Write a system of equations and solve the problem using elimination. (DOK 2)

Step 1 Define the variables.
- Let x = the first number
- Let y = the second number

Step 2 Write one of the equations using the statement, "*Two numbers have a sum of 34*".
- $x + y = 34$

Step 3 Write the second equation using the statement "*and a difference of 18.*"
- $x - y = 18$

Step 4 Use the elimination method to solve the system in the space below.

$x + y = 34$ $\quad$ $26 + y = 34$

$\underline{x - y = 18}$ $\quad$ $y = 8$

$2x = 52$

$x = 26$

Step 5 Check your answer below. Do your two numbers have a sum of 34 and a difference of 18?

Yes.

$26 + 8 = 34$ and $26 - 8 = 18$

2. Recall that equivalent equations are equations that have the same solutions. Are the two systems of equations below equivalent? How do you know? (DOK 3)

System 1	System 2
$3x + 2y = 12$ $y = x + 1$	$-3x - 2y = -12$ $2x + 3y = 13$

Step 1 Examine the equations in the systems.
- What similarities are there between the equations in System 1 and System 2?
  The first equations in each system are different only by a multiple of –1.

Step 2 Can you produce any of the equations in System 2 by multiplying any of the equations in System 1 by a constant? Justify your answer below.

Yes, multiplying $3x + 2y = 12$ by -1 results in $-3x - 2y = -12$.

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GUIDED PRACTICE

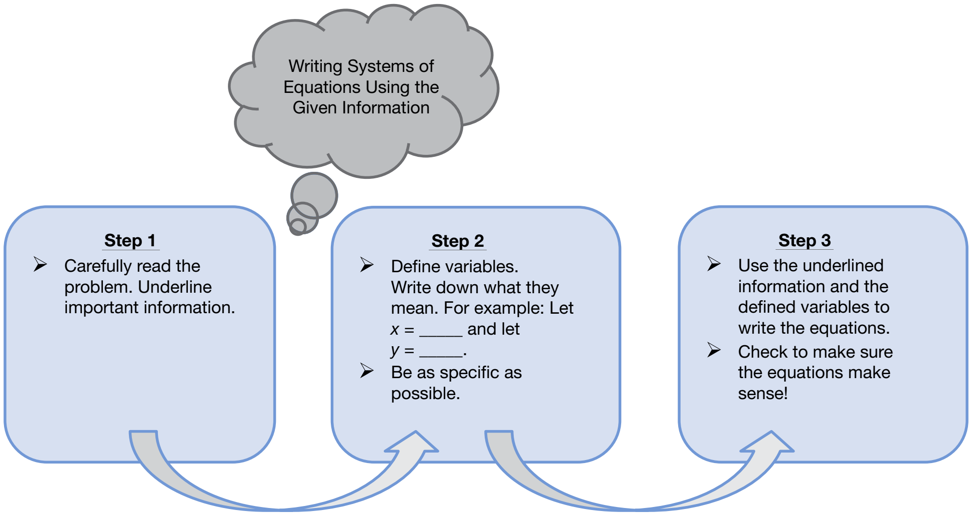
Question 1: Visual Summary

Purpose

In this activity, students create their own visual summary of a process to help them translate word problems into systems of equations.

Implementation

- Divide students into pairs or have them complete this task individually.
- Consider providing a framework for the visual summary, or allow students to create their own. A sample is shown below.
- Once students have completed their visual summary, select a few to share, or complete a class visual summary to be displayed on the classroom wall for reference.



Writing Systems of Equations Using the Given Information

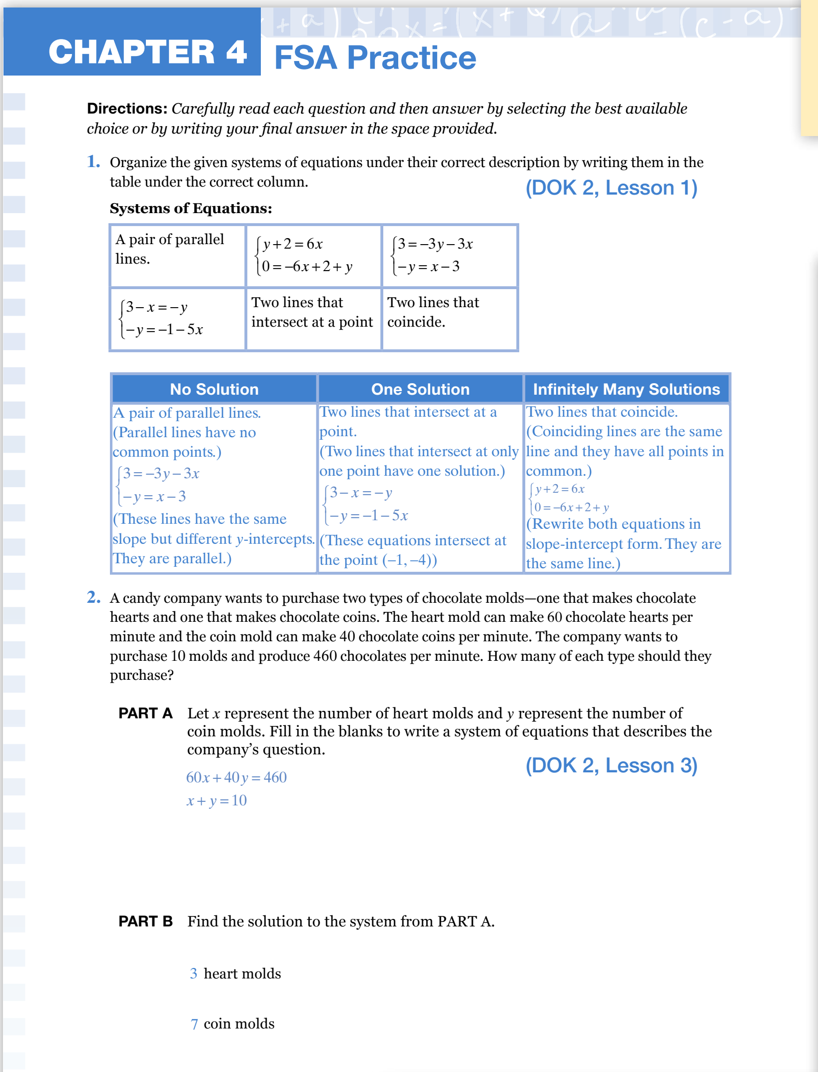
Step 1
- ➢ Carefully read the problem. Underline important information.

Step 2
- ➢ Define variables. Write down what they mean. For example: Let x = _____ and let y = _____.
- ➢ Be as specific as possible.

Step 3
- ➢ Use the underlined information and the defined variables to write the equations.
- ➢ Check to make sure the equations make sense!

FLORIDA STANDARDS ASSESSMENT EOC PRACTICE

- Each chapter concludes with FSA EOC practice.
- Each chapter test item is tagged with a DOK level.



CHAPTER 4 FSA Practice

Directions: *Carefully read each question and then answer by selecting the best available choice or by writing your final answer in the space provided.*

1. Organize the given systems of equations under their correct description by writing them in the table under the correct column.

(DOK 2, Lesson 1)

Systems of Equations:

A pair of parallel lines.	$\begin{cases} y+2=6x \\ 0=-6x+2+y \end{cases}$	$\begin{cases} 3=-3y-3x \\ -y=x-3 \end{cases}$
$\begin{cases} 3-x=-y \\ -y=-1-5x \end{cases}$	Two lines that intersect at a point	Two lines that coincide.

No Solution	One Solution	Infinitely Many Solutions
A pair of parallel lines. (Parallel lines have no common points.) $\begin{cases} 3=-3y-3x \\ -y=x-3 \end{cases}$ (These lines have the same slope but different y-intercepts. They are parallel.)	Two lines that intersect at a point. (Two lines that intersect at only one point have one solution.) $\begin{cases} 3-x=-y \\ -y=-1-5x \end{cases}$ (These equations intersect at the point (–1, –4))	Two lines that coincide. (Coinciding lines are the same line and they have all points in common.) $\begin{cases} y+2=6x \\ 0=-6x+2+y \end{cases}$ (Rewrite both equations in slope-intercept form. They are the same line.)

2. A candy company wants to purchase two types of chocolate molds—one that makes chocolate hearts and one that makes chocolate coins. The heart mold can make 60 chocolate hearts per minute and the coin mold can make 40 chocolate coins per minute. The company wants to purchase 10 molds and produce 460 chocolates per minute. How many of each type should they purchase?

PART A Let x represent the number of heart molds and y represent the number of coin molds. Fill in the blanks to write a system of equations that describes the company's question.

(DOK 2, Lesson 3)

$60x+40y=460$

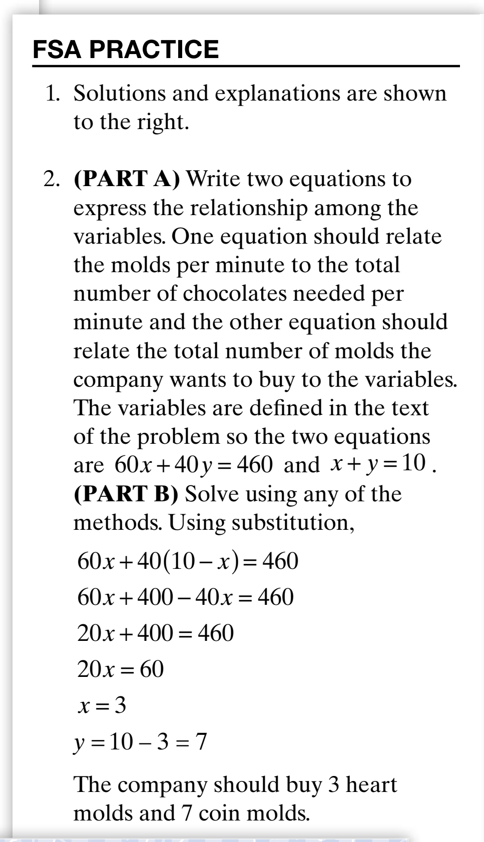
$x+y=10$

PART B Find the solution to the system from PART A.

3 heart molds

7 coin molds

120 Chapter 4 Systems — FSA Practice



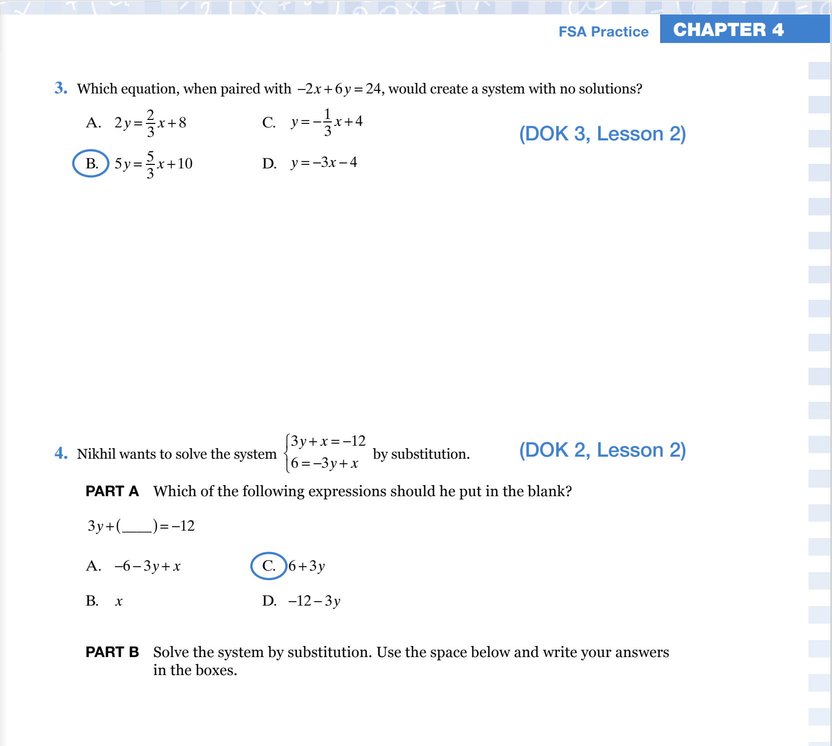
FSA PRACTICE

1. Solutions and explanations are shown to the right.

2. **(PART A)** Write two equations to express the relationship among the variables. One equation should relate the molds per minute to the total number of chocolates needed per minute and the other equation should relate the total number of molds the company wants to buy to the variables. The variables are defined in the text of the problem so the two equations are $60x+40y=460$ and $x+y=10$. **(PART B)** Solve using any of the methods. Using substitution,

$$60x+40(10-x)=460$$
$$60x+400-40x=460$$
$$20x+400=460$$
$$20x=60$$
$$x=3$$
$$y=10-3=7$$

The company should buy 3 heart molds and 7 coin molds.



FSA Practice **CHAPTER 4**

3. Which equation, when paired with $-2x+6y=24$, would create a system with no solutions?

(DOK 3, Lesson 2)

A. $2y=\frac{2}{3}x+8$ C. $y=-\frac{1}{3}x+4$

[✓ B.] $5y=\frac{5}{3}x+10$ D. $y=-3x-4$

4. Nikhil wants to solve the system $\begin{cases} 3y+x=-12 \\ 6=-3y+x \end{cases}$ by substitution.

(DOK 2, Lesson 2)

PART A Which of the following expressions should he put in the blank?

$3y+(\_\_\_\_)=-12$

A. $-6-3y+x$ [✓ C.] $6+3y$

B. x D. $-12-3y$

PART B Solve the system by substitution. Use the space below and write your answers in the boxes.

FLORIDA ALGEBRA 1 DIGITAL

Student Application

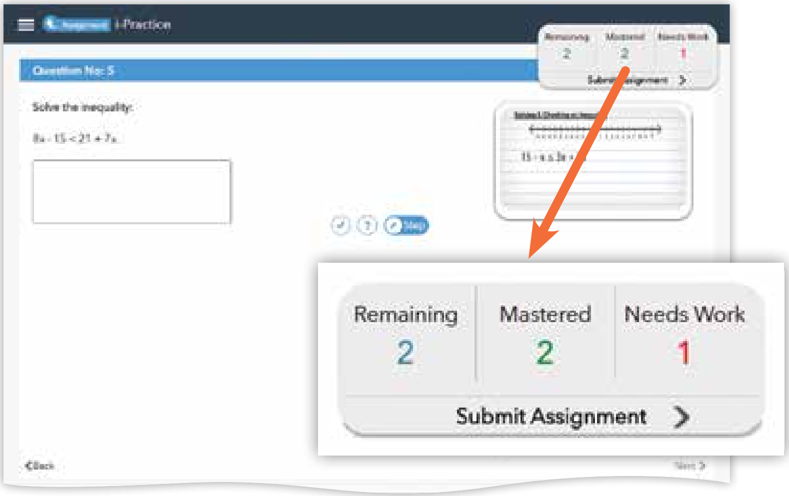
Driven by the powerful *Math*^{X} personalized practice and assessment system, the student application provides a full range of assignments and practice aligned with *Mathematics Florida Standards Algebra 1,* including

- *i-Practice* personalized assignments
- online homework assignments
- quizzes and chapter tests
- diagnostic tests
- Florida Standards Assessment EOC practice

i-PRACTICE PERSONALIZED PRACTICE

Each *i-Practice* assignment can be customized to small groups or individual students. By focusing on specific skill areas, students can practice their way to success.

- Incorrect answers automatically generate new problems for students to attempt.
- A scoring counter shows progress on the assignment.
- Guided practice provides point-of-use help.
- Students have the option to stop and return to the assignment at any time.



Solve the inequality:

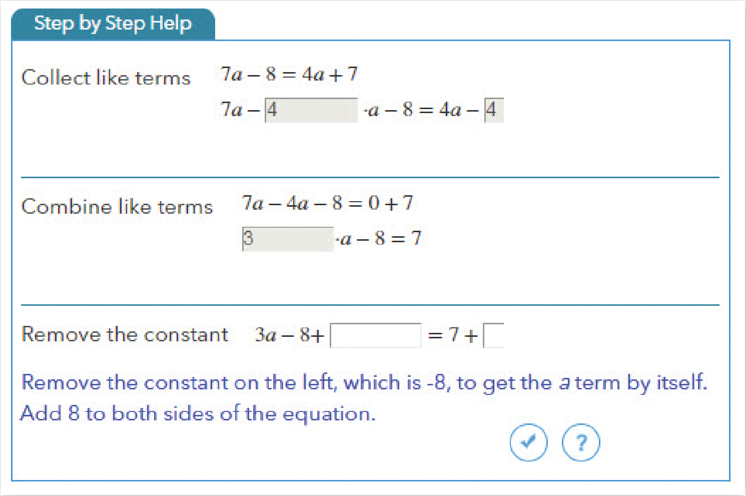
$8a - 15 < 21 + 7a$

Remaining	Mastered	Needs Work
2	2	1

GUIDED PRACTICE ASSISTANCE

For *i-Practice* and homework assignments, students have a wealth of help accessible next to the problem. By providing multiple help options, the program addresses different learning styles and ability levels.

- Video provides step-by-step instruction for a similar problem.
- Step-by-Step Help guides students through each step of a multi-step problem.
- A help button gives problem hints and tips.
- Smart feedback responds to students' incorrect answers with suggestions.



Collect like terms $7a - 8 = 4a + 7$

$7a - \boxed{4} \cdot a - 8 = 4a - \boxed{4}$

Combine like terms $7a - 4a - 8 = 0 + 7$

$\boxed{3} \cdot a - 8 = 7$

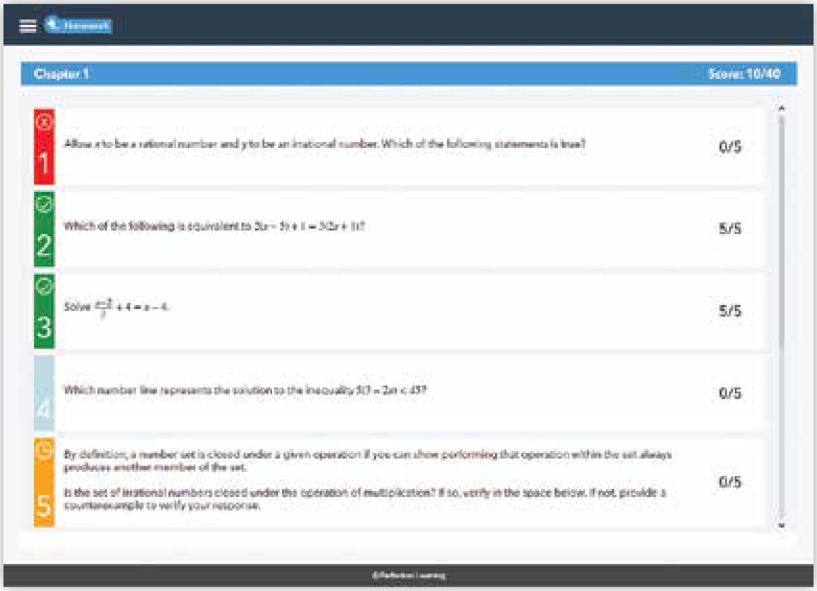
Remove the constant $3a - 8 + \boxed{} = 7 + \boxed{}$

Remove the constant on the left, which is -8, to get the *a* term by itself. Add 8 to both sides of the equation.

ONLINE HOMEWORK, QUIZZES, AND TESTS

Assignments allow students the flexibility to answer questions in any order and give immediate feedback once an answer is submitted.

- Homework parameters set by the teacher allow multiple tries.
- Help functions (videos, hints/tips, step-by-step) appear for homework.
- Quizzes and tests eliminate the help functions automatically. Tests allow only one try. Quizzes allow for one or more tries, as set by the teacher.
- Assignment due dates, grades, and teacher communications are all easily visible from the student dashboard.



Chapter 1 Score: 10/40

1 Allow x to be a rational number and y to be an irrational number. Which of the following statements is true? 0/5

2 Which of the following is equivalent to $3x - 5) + 1 = 3(2x + 1)$? 5/5

3 Solve $\frac{x+2}{7} + 4 = x - 4$. 5/5

4 Which number line represents the solution to the inequality $5(7 - 2x) < 45$? 0/5

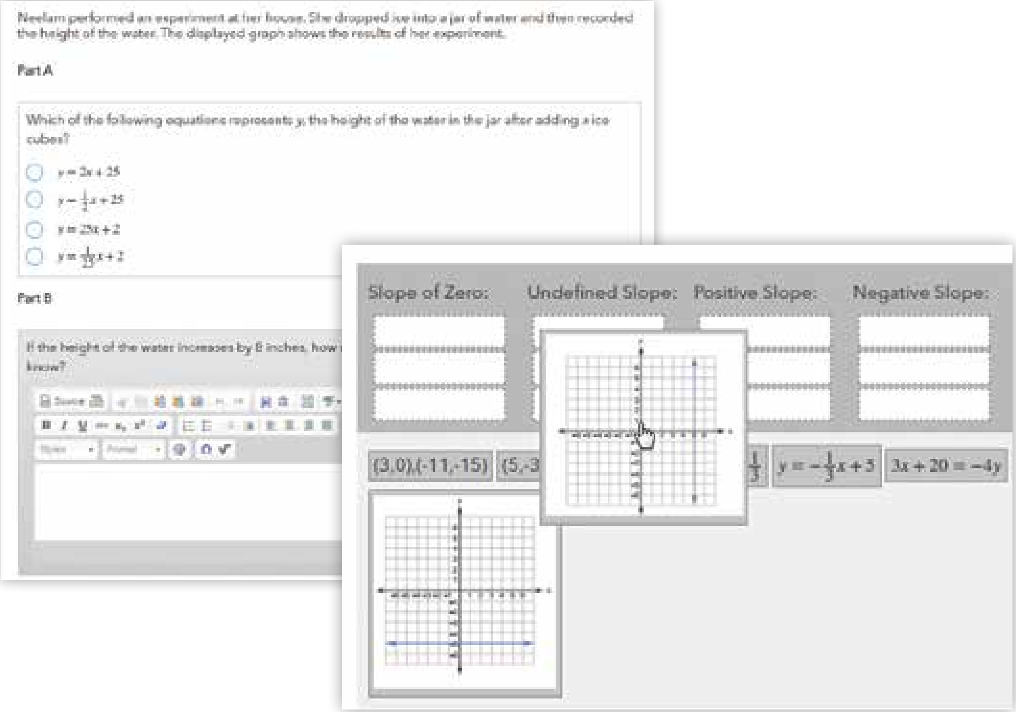
5 By definition, a number set is closed under a given operation if you can show performing that operation within the set always produces another member of the set.

Is the set of irrational numbers closed under the operation of multiplication? If so, verify in the space below. If not, provide a counterexample to verify your response. 0/5

TECHNOLOGY-ENHANCED ITEMS

Research shows that content mastery requires the ability to respond to a wide range of problem formats. Problem types include

- multi-part problems
- equation input
- graphing
- drag and drop
- multi-select
- open response
- *and much more...*



Neelam performed an experiment at her house. She dropped ice into a jar of water and then recorded the height of the water. The displayed graph shows the results of her experiment.

Part A

Which of the following equations represents y, the height of the water in the jar after adding x ice cubes?

○ $y = 2x + 25$
○ $y = \frac{1}{2}x + 25$
○ $y = 25x + 2$
○ $y = \frac{1}{25}x + 2$

Part B

If the height of the water increases by 8 inches, how

know?

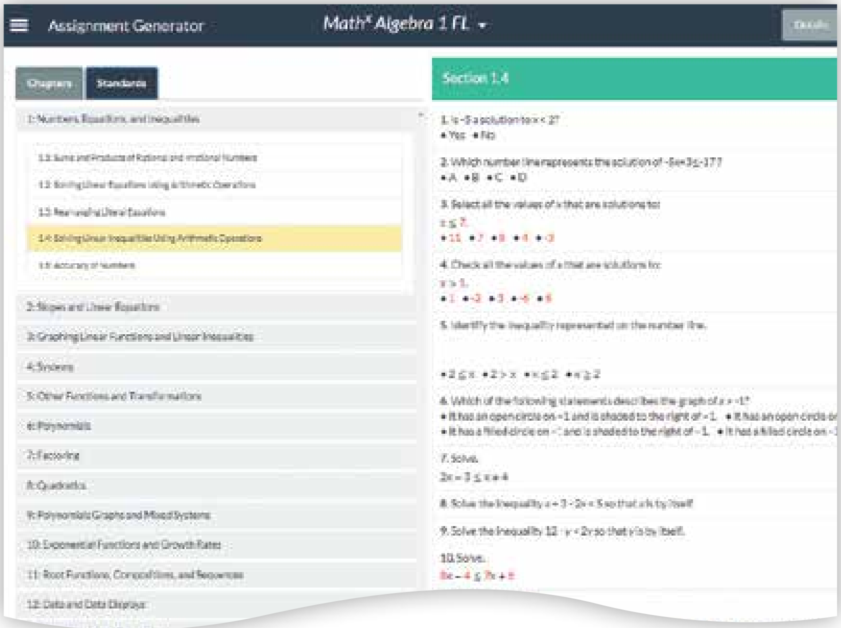
Teacher Application

Driven by the powerful *Math*^{X} personalized practice and assessment system, the teacher application provides a full range of assignment, reporting, and grading functions. Comprehensive alignment with *Mathematics Florida Standards Algebra 1* provides teachers the ability to monitor student progress in real time and customize assignments based on performance.

PRE-BUILT ASSIGNMENTS

Each assignment is aligned with the *Mathematics Florida Standards: Algebra 1* lessons. Pre-built assignments include

- ***i-Practice***, **homework, quizzes, chapter tests, FSA EOC model exams, and diagnostic tests**
- **one-click due date assignment**
- **standards covered by each lesson with rollover explanations for the standards**
- **easy assignment modification functionality**



CUSTOMIZABLE ASSIGNMENTS AND TESTS

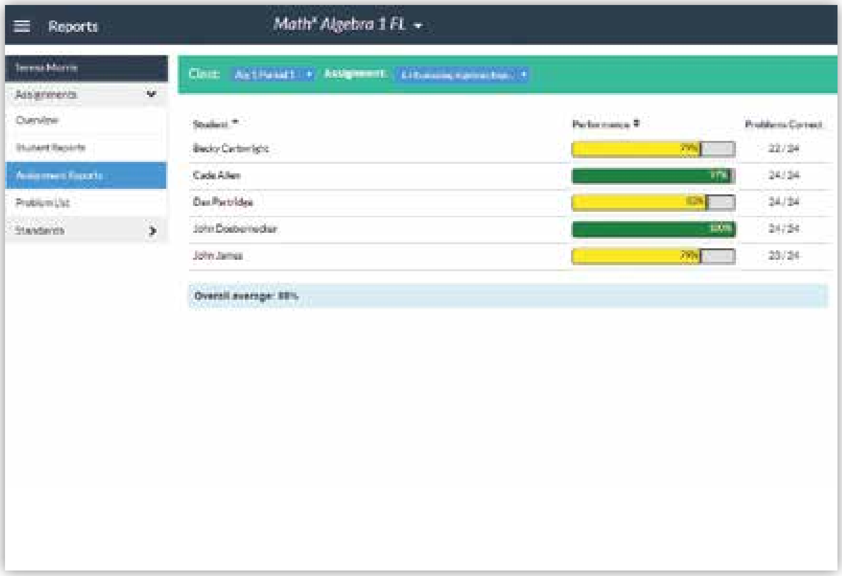
Modify the pre-built assignments or create your own.

- **Choose from thousands of items by standard or by lesson.**
- **Differentiate assignments for small groups or individuals.**
- **Create unique assignments for each student using "vary the parameter" technology.**
- **Print assignments for pencil and paper exercises.**

REAL-TIME PROGRESS MONITORING

Grade book functions allow teachers to monitor student progress in real time.

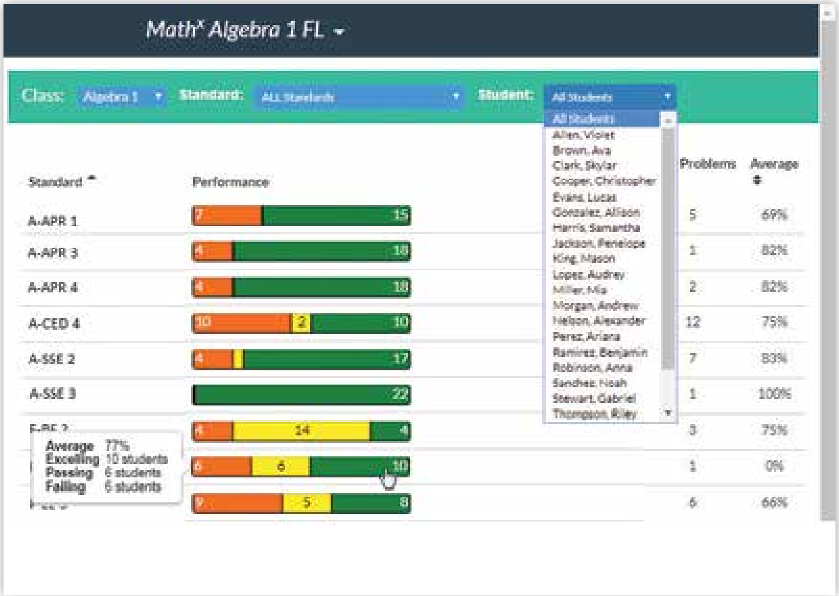
- assignments are automatically graded at time of submission
- at-a-glance look at student and class performance across homework, quizzes, and tests
- one-click access to individual student performance
- manage due dates and late assignments for individual students
- add/drop grades
- export function for district grade books



EXTENSIVE REPORTING CAPABILITY

Reporting and drill-down functions allow teachers to

- assess class and student performance by standard or lesson
- identify students and topics for reteaching and remediation
- group students by ability and performance levels
- evaluate item-level performance by class and by student



Standard	Performance	Problems	Average
A-APR 1	7 15	5	69%
A-APR 3	4 18	1	82%
A-APR 4	4 18	2	82%
A-CED 4	10 2 10	12	75%
A-SSE 2	4 17	7	83%
A-SSE 3	22	1	100%
	4 14 4	3	75%
	6 6 10	1	0%
	9 5 8	6	66%

Average 77%
Excelling 10 students
Passing 6 students
Failing 6 students

MATHEMATICS FLORIDA STANDARDS

Algebra 1

The ***Mathematics Florida Standards*** program provides the foundation for Algebra 1 success. Designed specifically for Florida, each standards-based lesson helps students identify areas of weakness, receive targeted instructional support and practice, and prepare for the Florida Standards Assessment End-of-Course.

Students engage in active discourse to build math literacy through

- discovery-based learning
- direct instruction
- personalized practice
- real-world application, extension activities, and authentic FSA practice

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For more information on the Mathematics Florida Standards program, visit perfectionlearning.com/fl-algebra-1

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