

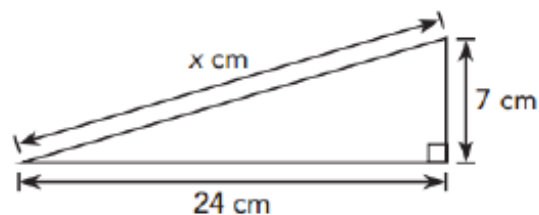
Lesson 5.1 Solving Systems of Linear Equations Using Tables

Week 1 Thursday Course 3 Warm-up

Find the Slope
(1, -19) (-2, -7)



Pythagorean Theorem



Simplify the Expression
Write in Exponential Notation

$$(a^6 \cdot a^7)^3 \div (4a^3)^2$$

Simplify Expression
Write as positive exponent

$$\frac{2^8 \cdot (-3)^8 \cdot 3^0}{5^{-8}}$$

Lesson 5.1 Solving Systems of Linear Equations Using Tables

Week 1 Thursday Course 3 Warm-up

Find the Slope

$$(1, -19) \quad (-2, -7)$$

$$\frac{-7 - (-19)}{-2 - 1} = \frac{12}{-3} = -4$$

Given two points:

$$(x_1, y_1) \quad (x_2, y_2)$$

Slope Formula:

$$\frac{y_2 - y_1}{x_2 - x_1}$$

$$x_2 - x_1$$



Pythagorean Theorem

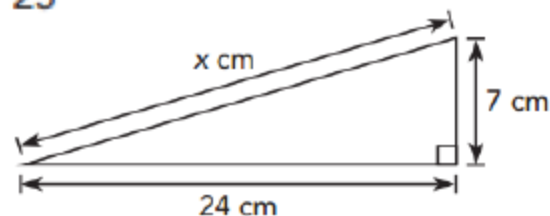
$$x^2 = 24^2 + 7^2$$

$$x^2 = 576 + 49$$

$$x^2 = 625$$

$$x = \sqrt{625}$$

$$x = 25$$



Simplify the Expression
Write in Exponential Notation

$$(a^6 \cdot a^7)^3 \div (4a^3)^2$$

$$\frac{a^{33}}{16}$$

Simplify Expression
Write as positive exponent

$$\frac{2^8 \cdot (-3)^8 \cdot 3^0}{5^{-8}}$$

$$30^8$$

Lesson 5.1 Solving Systems of Linear Equations Using Tables

Objective

TSW solve systems of linear equations by finding the unique solution using the following strategy...

*Creating a table



▶ A system of linear equations may have a unique solution. It can be solved using the elimination, substitution, or graphical methods.

Common Core State Standards

8EE 8a Understand that solutions to a system...satisfy both equations simultaneously.

Mathematical Practices 2 Reason 3 Construct arguments 4 Model Mathematics

Lesson 5.1 Solving Systems of Linear Equations Using Tables

How to Solve System of Linear Equation by making table.

- 1). Substitute Values for X
- 2). Input in Table of Values
- 3.) Find the Unique Solution (Same in both tables)

Guided Practice page 194

Lionel is x years old and his younger brother is y years old. The difference in their ages is 1 year. The sum of 4 times Lionel's age and his brother's age is 14 years. The related system of linear equations is:

$$x - y = 1$$

$$4x + y = 14$$

Solve the system of linear equations by making tables of values. Then find Lionel's age and his brother's age.

x	2	3	4
y	<input type="text"/>	<input type="text"/>	<input type="text"/>

x	1	2	3
y	<input type="text"/>	<input type="text"/>	<input type="text"/>

Lesson 5.1 Solving Systems of Linear Equations Using Tables

How to Solve System of Linear Equation by making table.

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Guided Practice page 194

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x	2	3	4
y	1	2	3

x	1	2	3
y	10	6	2

Lesson 5.1 Solving Systems of Linear Equations Using Tables

Solve each system of linear equations by making tables of values. Each variable x is a positive integer less than 6.

2 $x + 2y = 4$
 $x = 2y$

3 $3x + 2y = 10$
 $5x - 2y = 6$

Lesson 5.1 Solving Systems of Linear Equations Using Tables

Solve each system of linear equations by making tables of values. Each variable x is a positive integer less than 6.

2 $x + 2y = 4$
 $x = 2y$

$x = 2, y = 1$

3 $3x + 2y = 10$
 $5x - 2y = 6$

$x = 2, y = 2$

Lesson 5.1 Solving Systems of Linear Equations Using Tables

A blank sheet of lined paper with a vertical margin line on the left and horizontal blue lines for writing.

Lesson 5.1 Solving Systems of Linear Equations Using Tables

Independent Practice #1-12

Challenge-

*Solve created equations

“Pick a Snowflake”

*Create Word-toon for vocabulary words

Name: _____ Date: _____

Practice 5.1

Solve each system of linear equations by making tables of values. Each variable x is a positive integer less than 6.

1 $2x + y = 5$ $x - y = -2$	2 $x + 2y = 4$ $x = 2y$	3 $3x + 2y = 10$ $5x - 2y = 6$
4 $x - 2y = -5$ $x = y$	5 $2y - x = -2$ $x + y = 2$	6 $2x + y = 3$ $x + y = 1$
7 $x + 2y = 1$ $x - 2y = 5$	8 $2x - y = 5$ $2x + y = -1$	9 $2y + x = -1$ $x + y = 1$

Solve by making a table of values. The values x and y are integers.

10 A shop sells a party hat at x dollars and a mask at y dollars. On a particular morning, 10 hats and 20 masks were sold for \$30. In the afternoon, 8 hats and 10 masks were sold for \$18. The related system of linear equations is:

$$10x + 20y = 30$$

$$8x + 10y = 18$$

Solve the system of linear equations. Then find the cost of each hat and each mask.

11 Alicia is x years old and her cousin is y years old. Alicia is 2 times as old as her cousin. Three years later, their combined age will be 27 years. The related system of linear equations is:

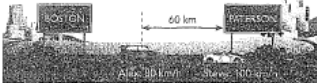
$$x = 2y$$

$$x + y = 21$$

Solve the system of linear equations. Then find Alicia's age and her cousin's age.

12 Steve and Alex start driving at the same time from Boston to Paterson. The journey is d kilometers. Steve drives at 100 kilometers per hour and takes t hours to complete the journey. Alex, who drives at 80 kilometers per hour, is 60 kilometers away from Paterson when Steve reaches Paterson. The related system of linear equations is:

$$100t = d$$

$$80t = d - 60$$


Solve the system of linear equations by making tables of values. Then find the distance between Boston and Paterson.

Name: _____ Wednesday Homework—Cumulative Review

Cumulative Review Chapters 3–4

Concepts and Skills

Solve each equation. Show your work. (Lesson 3.1)

1 $0.2(x + 2) - 2 = 0.4$	2 $2(x - 5) - 3(3 - x) = \frac{1}{2}(x - 2)$
3 $\frac{x}{3} + \frac{3+x}{6} = 3$	4 $\frac{2x+20}{3} - \frac{x-1}{2} = 2$

Express each decimal as a fraction, without the use of calculator. (Lesson 3.1)

5 0.5	6 0.8
7 0.27	8 0.09

Course 1

Lesson Check —#5 Can solve systems of equation by making tables of values.