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GRADE 8

Teacher Resource Copy Masters

UNITS 4-6



Kendall Hunt

Book 2 Certified by Illustrative Mathematics®

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LESSON BLACKLINE MASTERS

Activity Grade8.4.15.2	Activity Grade8.4.13.3	Activity Grade8.4.8.2	Activity Grade8.4.5.2	Activity Grade8.4.3.2	address
Racing and Play Tickets Cards	Different Types of Systems Handout	Solutions Cards	Trading Moves Cards	Matching Equation Moves Cards	title
4	2	ω	2	2	students per copy
no	yes	yes	yes	no	written on?
yes	no	yes	yes	yes	requires cutting?
no	no	no	no	no	card stock recommended?
no	no	no	no	no	color paper recommended?
no	no	no	no	no	used multiple times?
no	no	no	no	no	used as a center material?

Matching Equation Moves

$$\begin{pmatrix} 3x + 7 = 5x \\ 7 = 2x \end{pmatrix}$$

Matching Equation Moves

Multiply each side by $-\frac{1}{3}$.

Matching Equation Moves

$$\binom{12x+3=6}{4x+1=2}$$

Matching Equation Moves

Add -3x to each side.

Matching Equation Moves

3

$$\binom{10-6x=4+5x}{7-6x=1+5x}$$

Matching Equation Moves

Add 3x to each side.

Matching Equation Moves

4

$$\begin{pmatrix} \frac{5x}{-3} = \frac{12}{1} \\ 5x = -36 \end{pmatrix}$$

Matching Equation Moves

Add -3 to each side.

Matching Equation Moves

5

$$-3(4x-3) = -15$$

 $4x-3=5$

Matching Equation Moves

E

Multiply each side by $\frac{1}{3}$.

Matching Equation Moves

Matching Equation Moves

Multiply each side by -3.

Trading Moves

1.
$$-6x - 7 = 4x - 2$$

Trading Moves

$$2. \qquad \frac{1}{2}(7x-6) = 6x - 10$$

Trading Moves

3.
$$\frac{1}{2}x + 7 = x + 13$$

Trading Moves

4.
$$2(x + 7) = -4x + 14$$

Card Sort: Solutions

Α

$$7(x-5) = x + 13$$

Card Sort: Solutions

В

$$-6x = -5(x - 1) - x$$

Card Sort: Solutions

C

$$-4(x-2) = -2(x-\frac{17}{2})$$

Card Sort: Solutions

$$3 - 4x + 5 = 2(8 - 2x)$$

Card Sort: Solutions

E

$$2x + 3 = 3 + 2x$$

Card Sort: Solutions

$$2x + 3 = 2x + 5$$

Card Sort: Solutions

G

$$3x + 9 = 2.5x + 14$$

Card Sort: Solutions

Н

$$7(x-4)=4x+5$$

Card Sort: Solutions

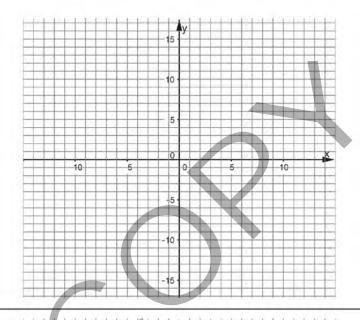
$$5x - 20 = -7x - 20$$

Card Sort: Solutions

3(2x + 1) - 4x = 2x + 3

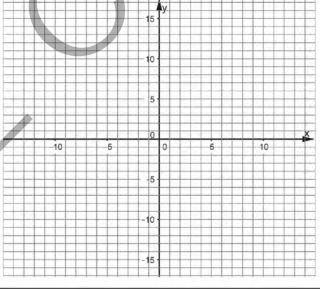
$$A\begin{cases} y = -4(x-2) \\ y = -2\left(x - \frac{5}{2}\right) \end{cases}$$

One solution

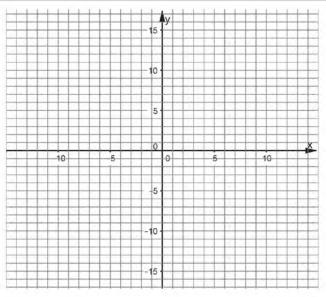


$$B \begin{cases} y = 5(x - 3) \\ y = 2x - 6 \end{cases}$$

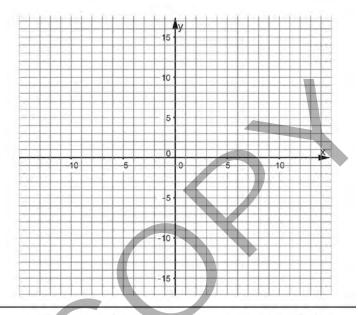
One solution



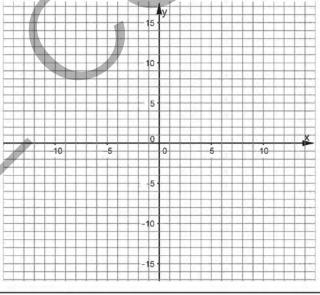
$$C \begin{cases} y = 2x + 3 \\ y = 2x - 5 \end{cases}$$
 No solutions



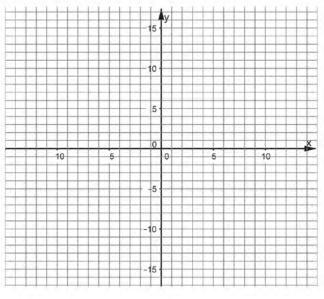
$$D \begin{cases} y = -6x \\ y = -5(x-2) - x \end{cases}$$
 No solutions



$$E\begin{cases} y = 3(2x+1) - 4x \\ y = 2x+3 \end{cases}$$
Infinite solutions







Info Gap: Racing and Play Tickets

Problem Card 1

Priya and Lin are having a race. The equation y = 9.5x represents one person's progress.

If one of them had a head start, how long is it until the other person catches up? Info Gap: Racing and Play Tickets

Data Card 1

- The equation y = 9.5x represents Lin's progress, where y is her distance, in feet, from the starting line, and x is the time, in seconds, that she has been running.
- Priya had the head start. She was 18 feet in front of the starting line when Lin started.
- Priya runs at a constant 8 feet per second.

Info Gap: Racing and Play Tickets

Problem Card 2

A school sells adult tickets and student tickets for the drama play. One equation that represents the situation is x + y = 115.

How many of each type of ticket did they sell?

Info Gap: Racing and Play Tickets

Data Card 2

- The equation x + y = 115 represents how many tickets were sold, where x is student tickets and y is adult tickets.
 This equation is equivalent to x = 115 y.
- Adult tickets cost \$8 each.
- Student tickets cost \$3 each.
- The school made \$720 total from ticket sales.

Info Gap: Racing and Play Tickets

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UNIT

5

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students written requires card stock per copy on? cutting? recommended? recommended? recommended? will recommended? no no no no no no no no	Activity Grade8.5.21.3	Activity Grade8.5.1.2	address
tudents written requires card stock color paper recommended? recommended? recommended? wild recommended? no no no no	Unknown Dimensions Cards	Guess My Rule Cards	title
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used multiple times?	no	no	card stock recommended?
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used as a center material?	no	no	used multiple times?
	no	no	used as a center material?

Guess my Rule A	Guess my Rule B
Add 7	Multiply by 3
Guess my Rule C Double, then subtract 5	Guess my Rule D If even, divide by 2 If odd, multiply by 3 and add 1
Guess my Rule A	Guess my Rule B Multiply by 3
Guess my Rule C Double, then subtract 5	Guess my Rule D If even, divide by 2 If odd, multiply by 3 and add 1

Info Gap: Unknown Dimensions

Problem Card 1

A cone and a sphere have the same dimensions. What is the volume of the sphere?

Info Gap: Unknown Dimensions

Data Card 1

- The volume of the cone is $V=144\pi$ cm³.
- The radius of the cone is the same as the radius of the sphere.
- $4^3 = 64$, $5^3 = 125$, $6^3 = 216$, $7^3 = 343$

Info Gap: Unknown Dimensions

Problem Card 2

A cone and a sphere have the same height. What is the volume of the sphere?

Info Gap: Unknown Dimensions

Data Card 2

- The volume of the cone is $V=18\pi~{\rm cm^3}$.
- The radius of the sphere is half the height of the cone.
- The height of the cone is twice the value of the radius of the cone.
- $4^3 = 64$, $5^3 = 125$, $6^3 = 216$, $7^3 = 343$

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