IMKH California

GRADE 8

Teacher Resource Copy Masters

UNITS 4-6

Illustrative Mathematics LEARN MATH FOR LIFE | Kendall Hunt

Book 2

Certified by Illustrative Mathematics®

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GRADE 8

UNIT

4

Teacher Resource Copy Masters

LESSON BLACKLINE MASTERS

address	title	students per copy	written on?	requires cutting?	card stock recommended?	color paper recommended?	used multiple times?	used as a center material?
Activity Grade8.4.3.2	Matching Equation Moves Cards	2	no	yes	no	no	no	no
Activity Grade8.4.5.2	Trading Moves Cards	2	yes	yes	no	no	no	no
Activity Grade8.4.8.2	Solutions Cards	3	yes	yes	no	no	no	no
Activity Grade8.4.13.3	Different Types of Systems Handout	2	yes	no	no	no	no	no
Activity Grade8.4.15.2	Racing and Play Tickets Cards	4	no	yes	no	no	no	no

Matching Equation Moves
1

$3x + 7 = 5x$
$7 = 2x$

Matching Equation Moves
A

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

Matching Equation Moves
2

$12x + 3 = 6$
$4x + 1 = 2$

Matching Equation Moves
B

Add $-3x$ to each side.

Matching Equation Moves
3

$10 - 6x = 4 + 5x$
$7 - 6x = 1 + 5x$

Matching Equation Moves
C

Add $3x$ to each side.

Matching Equation Moves
4

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

Matching Equation Moves
D

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
6

Matching Equation Moves
F

Multiply each side by -3.

Trading Moves

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

Trading Moves

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

Trading Moves

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

Trading Moves

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

Card Sort: Solutions
A

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

Card Sort: Solutions
B

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

Card Sort: Solutions
C

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

Card Sort: Solutions
D

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

Card Sort: Solutions
E

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

Card Sort: Solutions
F

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

Card Sort: Solutions
G

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

Card Sort: Solutions
H

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

Card Sort: Solutions
I

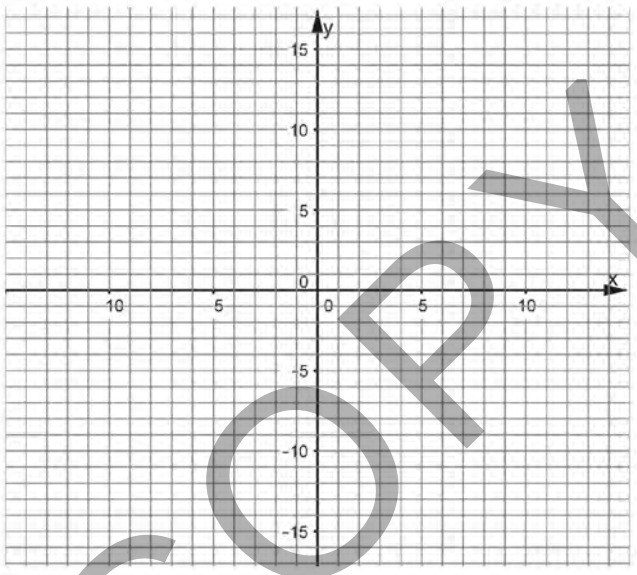
$$5x - 20 = -7x - 20$$

Card Sort: Solutions
J

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

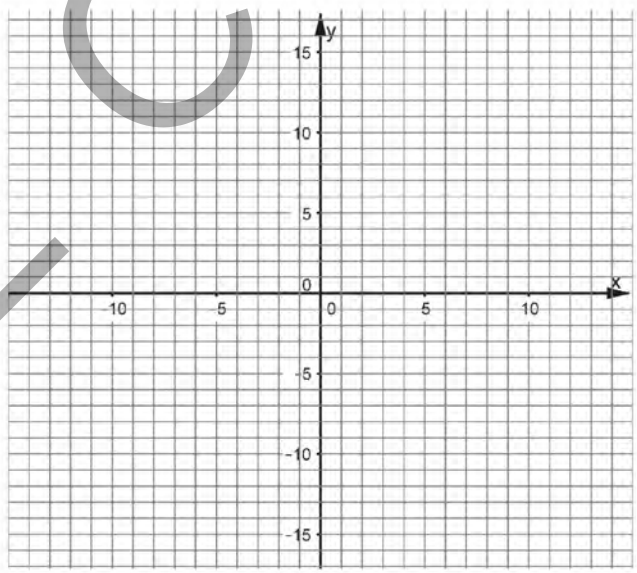
$A \begin{cases} y = -4(x-2) \\ y = -2\left(x - \frac{5}{2}\right) \end{cases}$

One solution



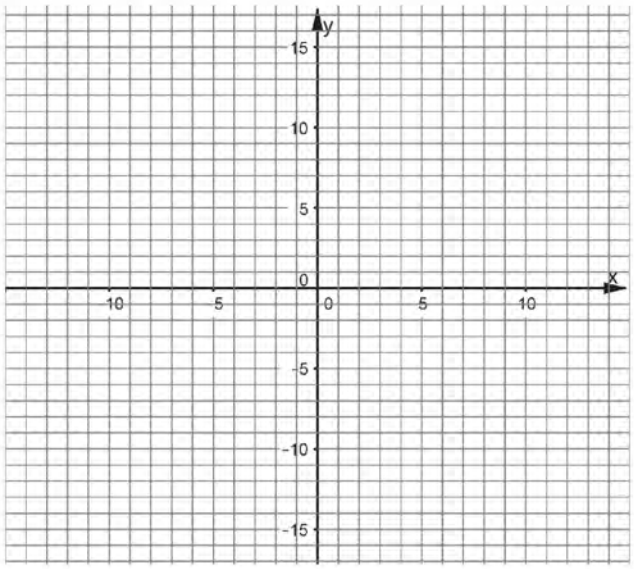
$B \begin{cases} y = 5(x-3) \\ y = 2x - 6 \end{cases}$

One solution



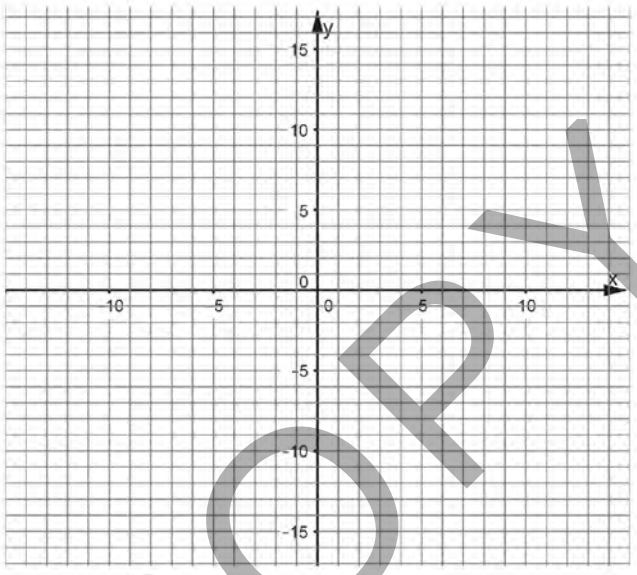
$C \begin{cases} y = 2x + 3 \\ y = 2x - 5 \end{cases}$

No solutions



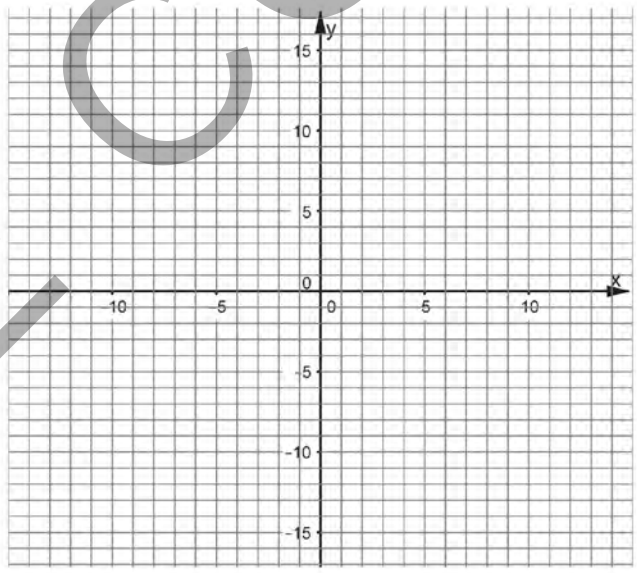
$$D \begin{cases} y = -6x \\ y = -5(x-2) - x \end{cases}$$

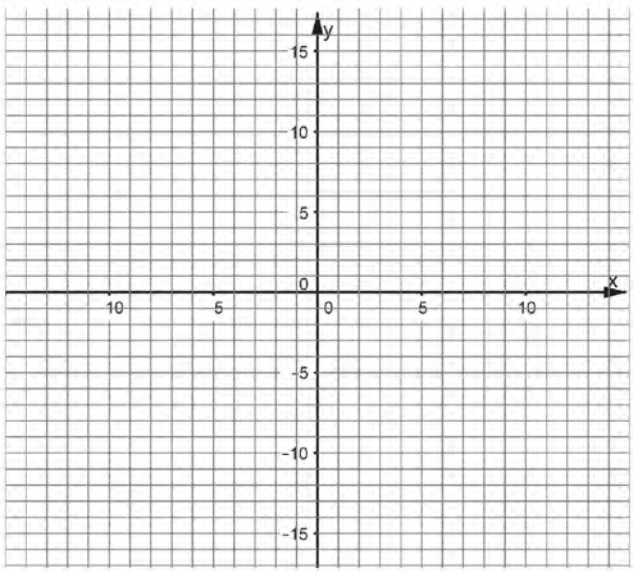
No solutions



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

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.

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Activity Grade8.5.1.2	Guess My Rule Cards	4	no	yes	no	no	no	no
Activity Grade8.5.21.3	Unknown Dimensions Cards	4	no	yes	no	no	no	no

Guess my Rule
A

Add 7

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

Guess my Rule
A

Add 7

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 $V = 144\pi$ cm^3.
- 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 $V = 18\pi$ 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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