

Make Practice Fun

Engaging Math Games

Games give students an opportunity to explore mathematical concepts, develop computational fluency and deepen understanding—all while having fun! Try the sample math games from *Classroom Mathematics California* and watch your students build mathematical connections.

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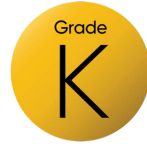
NAME: _____

Total Match

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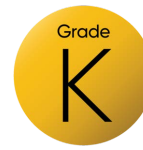
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Materials For each pair: 2 counters, Total Match Game Board, Compose 6, 7, 8 and 9 Cards

How to Play Place a counter on your gray square. Take four cards. Try to find totals that match your cards. Ask your partner for a card or take a new card to find a match. Move your counter one space for each match. Take a new card at the end of your turn. The player to reach the last square wins.



$$3 + 3$$

$$3 + 4$$

$$3 + 5$$

$$3 + 6$$

$$4 + 2$$

$$6 + 1$$

$$4 + 4$$

$$5 + 4$$

$$1 + 5$$

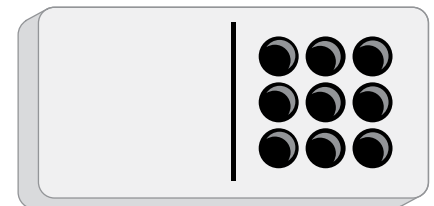
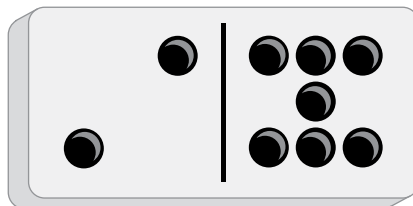
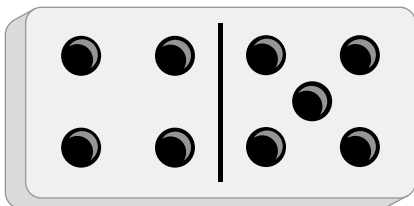
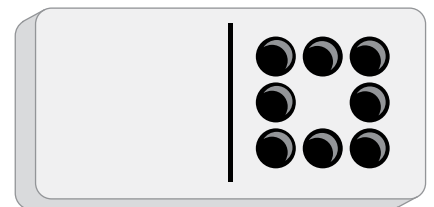
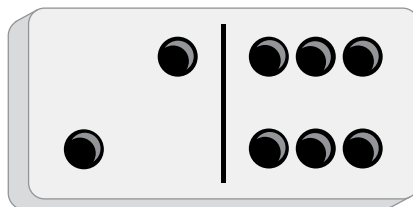
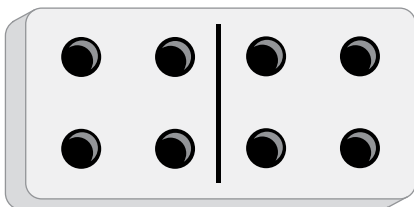
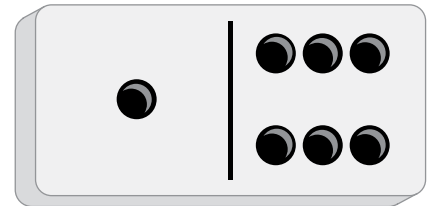
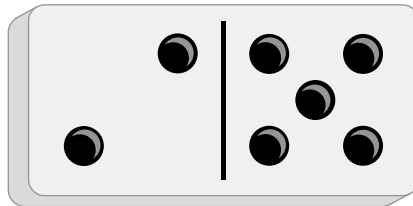
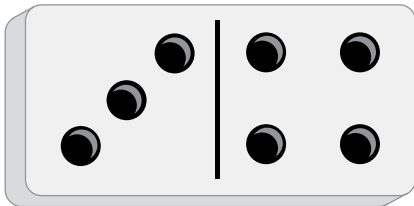
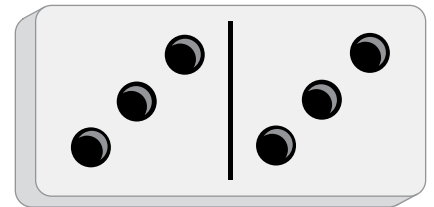
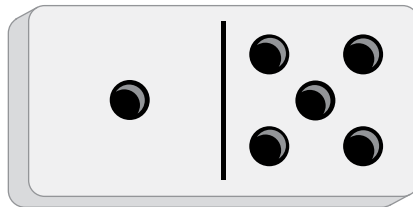
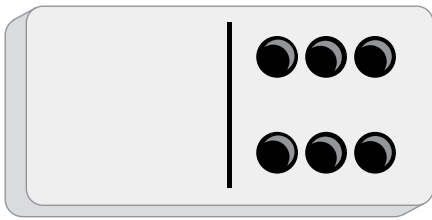
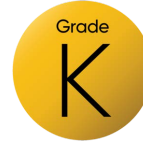
$$5 + 2$$

$$7 + 1$$

$$1 + 8$$



Composing 6, 7, 8, and 9 Cards





11

12

13

15

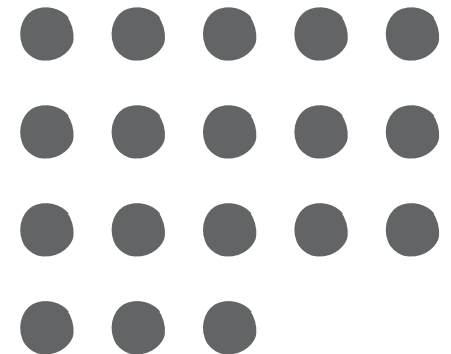
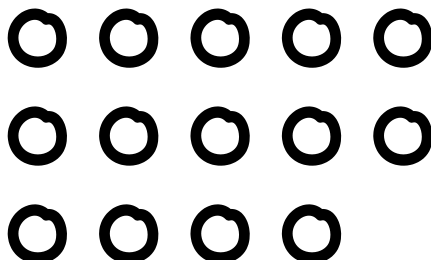
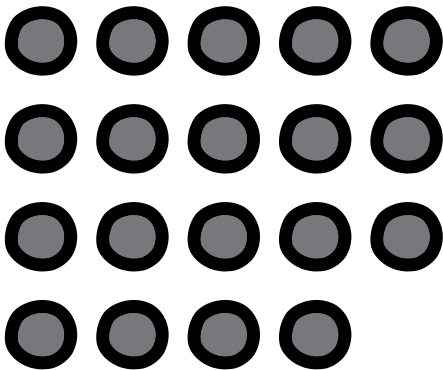
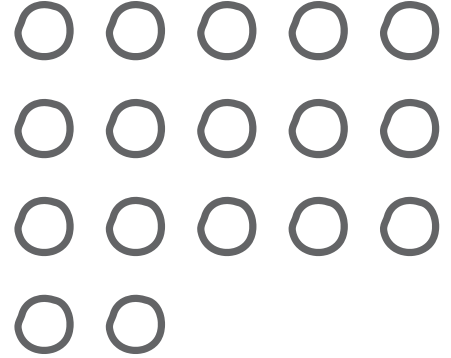
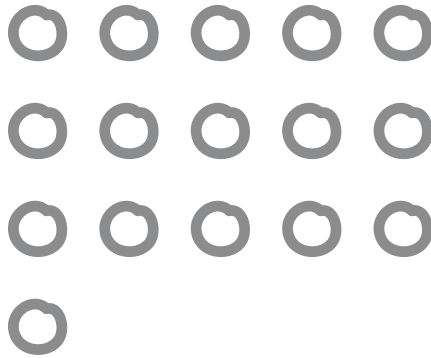
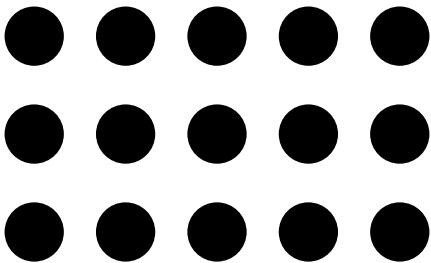
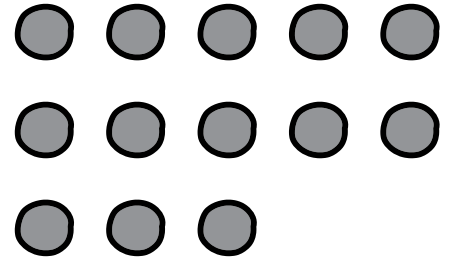
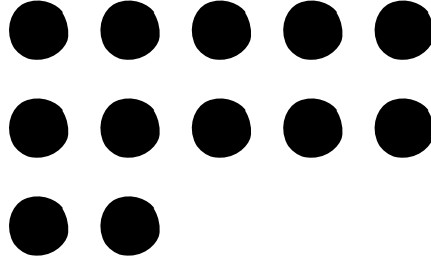
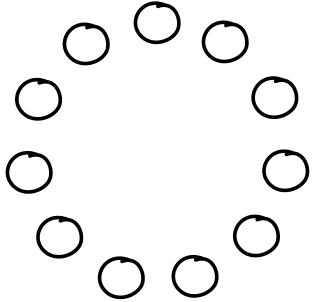
16

17

19

14

18



Compare Equations

What You Need

For each player:

- 1 *Equations Workmat*

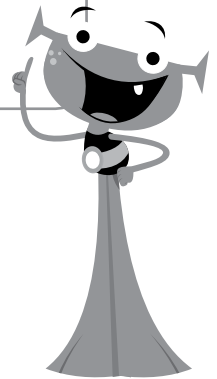
For each pair:

- 1 set of Number Cards 1 to 9

How to Play

- Mix the cards. Stack them facedown.
- Each player takes 2 cards.
- Use your cards to write an addition equation.
- The player with the greater total scores a point.
- Mix the cards and start over. The first player to score 4 points wins the game.

What strategies can you use to find the sum?



$$\boxed{5} + \boxed{9} = 14$$

Equations Workmat

Equations					Points
			=		
			=		
			=		
			=		
			=		
			=		
			=		



1

2

3

4

5

6

5

6

7

8

7

8

9

9

9

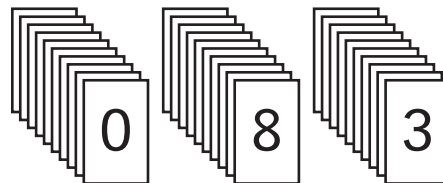
9

Unit 2 Game

Name: _____

Subtraction Action

What you need: *Subtraction Action* Recording Sheet, 2 sets of Digit Cards (0–9)



Directions

- Mix the Digit Cards and place them facedown in a stack. Each player takes 4 cards.
- Players each make 2 different two-digit numbers using their 4 cards. The goal is to make two numbers that are as close in value to each other as possible.
- Both players subtract their lesser number from their greater number. The difference tells how close the two numbers are. Players write their subtraction problems on the Recording Sheet.
- Players compare their differences and write the comparison on the Recording Sheet. The player with the lesser difference made two numbers that are closer together. This player wins the round.
- Put all the cards back and remix. Play 5 rounds. The player with more wins after 5 rounds wins the game.



Subtraction Action Recording Sheet

Name: _____

<u>Mike</u> Player A Name	<u>Sofia</u> Player B Name
1. $\begin{array}{r} \boxed{2}\boxed{6} \\ - \boxed{1}\boxed{8} \\ \hline 8 \end{array}$	1. $\begin{array}{r} \boxed{4}\boxed{5} \\ - \boxed{3}\boxed{0} \\ \hline 15 \end{array}$
1. $8 < 15$	

I subtracted 18 from 26. My difference of 8 is less than your difference of 15, so I win the first round.



Subtraction Action Recording Sheet

Player A Name

1.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

2.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

3.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

4.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

5.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

1. _____○_____

2. _____○_____

3. _____○_____

4. _____○_____

5. _____○_____

Player B Name

1.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

2.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

3.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

4.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

5.
$$\begin{array}{|c|c|} \hline \square & \square \\ \hline - & \square \\ \hline \end{array}$$

Name: _____

Grade

2

Digit Cards



0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9

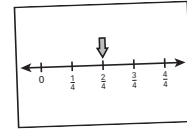
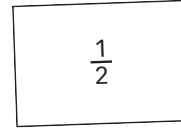
Unit 4 Game

Name: _____

Equivalent Fraction Match

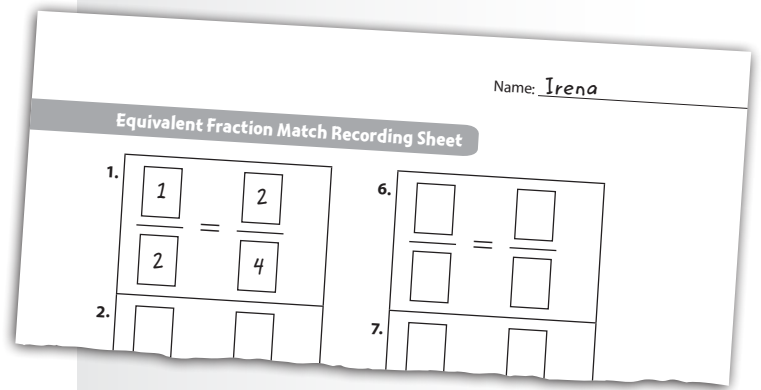
What you need:

Equivalent Fraction Match Recording Sheet,
Equivalent Fraction Match Game Cards



Directions

- Mix the Game Cards. Lay them facedown in 3 rows of 6 cards each.
- Take turns. Flip over two cards.
- If the cards show equivalent fractions, keep the cards. Record the equivalent fractions on the Recording Sheet.
- If the cards do not show equivalent fractions, turn them back over.
- Keep playing until all the cards are matched or no more matches can be found. The player with the most matches is the winner.



$\frac{1}{2}$ and $\frac{2}{4}$ are
equivalent fractions.
I have a match!



Name: _____



Equivalent Fraction Match Recording Sheet

1.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

2.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

3.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

4.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

5.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

6.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

7.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

8.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

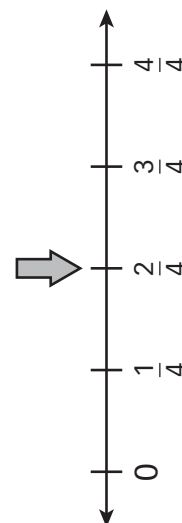
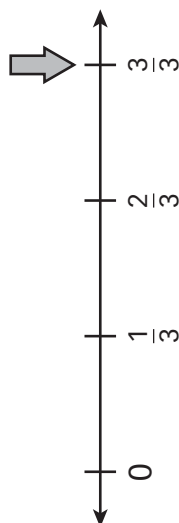
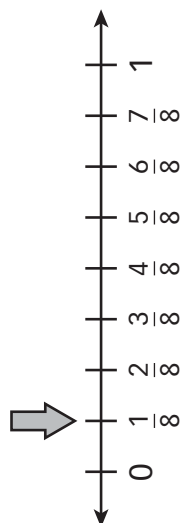
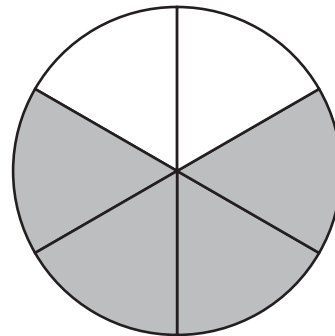
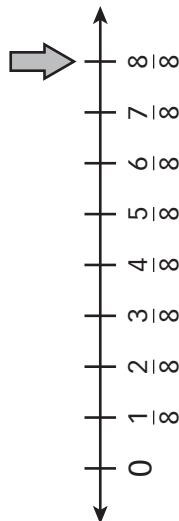
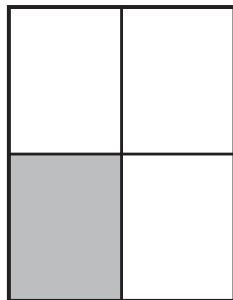
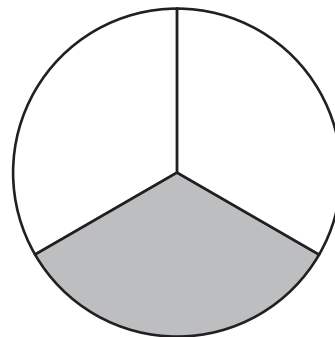
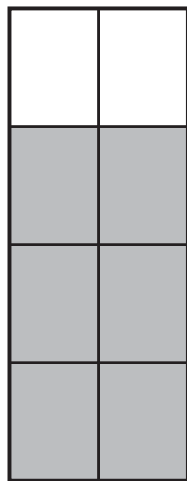
9.

$$\frac{\square}{\square} = \frac{\square}{\square}$$

Equivalent Fraction Match Game Cards

Grade

3





$$\frac{3}{4}$$

$$\frac{3}{6}$$

$$\frac{2}{6}$$

$$\frac{2}{8}$$

$$\frac{2}{2}$$

$$\frac{2}{3}$$

$$1\frac{1}{8}$$

$$\frac{6}{6}$$

$$1\frac{1}{2}$$

Unit 4 Game

Name: _____

Fraction Sums

What you need: *Fraction Sums* Recording Sheet,
2 number cubes (1–6)



Directions

- Players each choose a denominator from the list on the Recording Sheet. Players write their numbers in the *Denominator Choice* column of the Recording Sheet.
- Player A rolls the number cubes and makes two fractions using the numbers rolled as the numerators along with the chosen denominator.
- Player A writes and solves an addition equation with the two fractions as the addends on the Recording Sheet.
- Player B takes a turn following the same steps as Player A.
- Players compare the two fraction sums. The player with the greater sum wins the round.
- In each round, players choose a denominator that they have not used yet. The player with more wins after 5 rounds wins the game.

Name: Maya

Fraction Sums Recording Sheet

Denominators		Denominators	
2	3 4 6 8	2	3 4 6 8
Maya Player A Name		Isaac Player B Name	
Denominator Choice	Equation	Denominator Choice	Equation
1. <u>4</u>	$\frac{3}{4} + \frac{4}{4} = \frac{7}{4}$	1. <u>8</u>	$\frac{4}{8} + \frac{6}{8} = \frac{10}{8}$
2. _____	_____	2. _____	_____

I chose fourths.

$$\frac{3}{4} + \frac{4}{4} = \frac{7}{4}$$

That's the same

as $\frac{14}{8}$. I win this round because $\frac{14}{8}$ is greater than your sum of $\frac{10}{8}$.



Name: _____

Fraction Sums Recording Sheet

Denominators

2 3 4 6 8**Player A Name****Denominator
Choice****Equation**

1. _____

2. _____

3. _____

4. _____

5. _____

Final Score Player A

Denominators

2 3 4 6 8**Player B Name****Denominator
Choice****Equation**

1. _____

2. _____

3. _____

4. _____

5. _____

Final Score Player B

Unit 3 Game

Name: _____

Grade

5

Fraction and Decimal Products

What you need: *Fraction and Decimal Products*
Recording Sheet, 1 number cube (1–6)



Directions

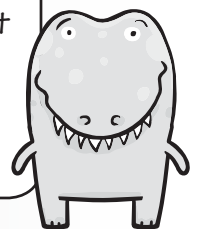
- Both players roll the number cube 4 times and record the four digits at the top of the Recording Sheet. Players use these same digits for Rounds 1 through 4.
- In Round 1, the player with the *greatest product* wins the round. Use the digits to make two fractions and multiply them. Record the product on the Recording Sheet.
- In Round 2, the player with the *least product* wins the round. Make two fractions and multiply them. Record the product.
- In Round 3, the player who makes the *greatest product* wins. Make two tenths decimals and multiply them. Record the product.
- In Round 4, the player who makes the *least product* wins. Again, make two tenths decimals and multiply.
- In Round 5, the players decide together whether to multiply fractions or decimals and whether to try for the greatest or least result. Players circle their choices on the Recording Sheet. After deciding, players both roll 4 new numbers to use in the final round.

_____ Name: _____

Fraction and Decimal Products Recording Sheet

Pam		Scott	
Player A Name		Player B Name	
Digits: 2 4 6 1		Digits: 5 3 1 4	
Greatest Product		Greatest Product	
1. $\frac{4}{2} \times \frac{6}{1} = 12$		1. $\frac{5}{1} \times \frac{4}{3} = 6\frac{2}{3}$	
Least Product		Least Product	
2. $\frac{\square}{\square} \times \frac{\square}{\square} = \square$		2. $\frac{\square}{\square} \times \frac{\square}{\square} = \square$	

The greater the fractions, the greater the sum. But is that true when multiplying two fractions?



Fraction and Decimal Products Recording Sheet

Player A Name
Digits:
Greatest Product

1. $\frac{\square}{\square} \times \frac{\square}{\square} = \square$

Least Product

2. $\frac{\square}{\square} \times \frac{\square}{\square} = \square$

Greatest Product

3. $\square.\square \times \square.\square$

Least Product

4. $\square.\square \times \square.\square$

Greatest Product/Least Product

5. $\frac{\square}{\square} \times \frac{\square}{\square} = \square$

$\square.\square \times \square.\square$

Player B Name
Digits:
Greatest Product

1. $\frac{\square}{\square} \times \frac{\square}{\square} = \square$

Least Product

2. $\frac{\square}{\square} \times \frac{\square}{\square} = \square$

Greatest Product

3. $\square.\square \times \square.\square$

Least Product

4. $\square.\square \times \square.\square$

Greatest Product/Least Product

5. $\frac{\square}{\square} \times \frac{\square}{\square} = \square$

$\square.\square \times \square.\square$



Decimal Scramble

What You Need

- Recording Sheet
- 3 number cubes labeled as follows:
 - 1 labeled 0–5;
 - 1 labeled 4–9;
 - 1 labeled 1, 2, 3, 6, 7, 8

Directions

- Your goal is to create two decimal numbers and multiply or divide them to get as close as possible to the target number.
- The target number is provided in the Recording Sheet, and it is different in each round.
- One player rolls the number cubes. Both players use the three digits to make a number. Each player decides how to order the digits and where to put the decimal point in his or her number.
- Roll again. Both players use the three digits to generate a second number.
- Players multiply or divide their numbers and record the multiplication or division equation on the Recording Sheet.
- The player whose product or quotient is closest to the target number for the round scores 1 point.
- The player with the most points after 4 rounds wins.

Sample Recording Sheet

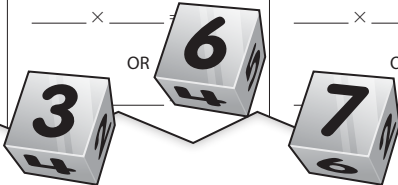
 GAME
UNIT 2

Names: _____

Decimal Scramble

RECORDING SHEET

Round	Target Number	Player A	Player B
1	1	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ OR $\underline{\quad} \div \underline{\quad} = \underline{\quad}$ Points: _____	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ OR $\underline{\quad} \div \underline{\quad} = \underline{\quad}$ Points: _____
2	10	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ OR $\underline{\quad} \div \underline{\quad} = \underline{\quad}$ Points: _____	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ OR $\underline{\quad} \div \underline{\quad} = \underline{\quad}$ Points: _____



KEEP IN MIND . . .

The two numbers that you multiply or divide can have a different number of decimal places.



Decimal Scramble

RECORDING SHEET

Round	Target Number	Player A	Player B
1	1	$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ OR $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ Points: _____	$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ OR $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ Points: _____
2	10	$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ OR $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ Points: _____	$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ OR $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ Points: _____
3	100	$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ OR $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ Points: _____	$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ OR $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ Points: _____
4	1,000	$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ OR $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ Points: _____	$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ OR $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ Points: _____



The Inequality Solution

What You Need

- Recording Sheet (1 for each player)
- Game Board
- 3 number cubes labeled as follows:
1 labeled 0–4 and “free choice”;
1 labeled 5–9 and “free choice”;
1 labeled 1–6
- counters (16 of one color per player)

Directions

- Your goal is to solve inequalities in order to cover as many Game Board squares as possible.
- For Round 1, choose one player to roll the number cubes and record the numbers. If “free choice” is rolled, the player may choose any number 0–9.
- The player uses the numbers rolled to fill in the blanks in the inequality for the round. The numbers may be written in any order, except the number 0 cannot be written in the first blank.
- The player solves the inequality and places a counter on a number on the Game Board that is within the solution set. (For example, if the solution is $x < -10$, you could place a counter on -18.4 or -27 , because both numbers are less than -10 .)
- If no uncovered number on the Game Board is a solution of the inequality, the player’s turn ends and no counter is placed.
- After eight rounds, the player with the most spaces covered wins.

Sample Recording Sheet

GAME
UNIT 4

Name: **Megan**

The Inequality Solution

RECORDING SHEET

Round	Numbers Rolled	Inequality	Solution
1	4, 6, 3	$4(x + 3) > 6$	$x > -\frac{6}{4}$
2		$______ x + ______ < ______$	
3		$______ x - ______ > ______$	
4		$______ (x - ______) < ______$	

KEEP IN MIND . . .

It may be helpful to think about a number line when determining if a value on the Game Board is in the solution set of an inequality.

-6	-8	14	
4.1	-2	$\frac{4}{3}$	-18.4
$38\frac{4}{5}$	5	-27	1
20	$\frac{5}{2}$	11	6.5



The Inequality Solution

RECORDING SHEET

Round	Numbers Rolled	Inequality	Solution
1		_____ (x + _____) > _____	
2		_____ x + _____ < _____	
3		_____ x - _____ > _____	
4		_____ (x - _____) < _____	
5		_____ (x + _____) > _____	
6		_____ x + _____ > _____	
7		_____ x - _____ > _____	
8		_____ x - _____ < _____	



The Inequality Solution

GAME BOARD

-6	-8	14	$\frac{1}{2}$
4.1	-2	$\frac{4}{3}$	-18.4
$38\frac{4}{5}$	5	-27	1
20	$\frac{5}{2}$	11	6.5



It's Systematic

What You Need

- Recording Sheet (1 for each player)
- Equation Cards
- 2 number cubes (1–6)
- grid paper (optional)

Directions

- Your goal is to score points by making systems of linear equations that have one solution, no solution, or infinitely many solutions.
- Shuffle the cards and place them in a pile facedown. Players take turns.
- On your turn, pick a card. Roll one or two number cubes to fill in the blanks in the equation. You can choose to make a number positive or negative. Record the roll and the equation on your Recording Sheet.
- Pick a new Equation Card. Roll the number cube(s) again. Use the new number(s) and Equation Card to record a second equation.
- Use the equations to form a system of equations. Then solve the system of equations.
- The other player(s) check your solution. If you are correct, score as follows:
 - One solution = 1 point
 - No solution = 2 points
 - Infinitely many solutions = 5 points
- Play five rounds. The player with the most points wins.

Sample Recording Sheet

GAME
UNIT 3

Name: **Olive**

It's Systematic

RECORDING SHEET

Round	Roll 1	Equation 1	Roll 2	Equation 2	Solution	Points
1	2, 3	$y = 3x + 2$	4	$y = -4x$	$x = \frac{-2}{7}$ $y = \frac{8}{7}$	1
2						

KEEP IN MIND . . .

You can solve a system of equations algebraically by using substitution or elimination.



$$y = \underline{\hspace{1cm}} x$$



It's Systematic

RECORDING SHEET

Round	Roll 1	Equation 1	Roll 2	Equation 2	Solution	Points
1						
2						
3						
4						
5						
Total Points:						



$$y = \underline{\quad} x$$

$$y = \underline{\quad} x + \underline{\quad}$$

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

$$y = \underline{\quad} x$$

$$y = \underline{\quad} x + \underline{\quad}$$

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

$$y = \underline{\quad} x$$

$$y = \underline{\quad} x + \underline{\quad}$$

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

$$y = \underline{\quad} x$$

$$y = \underline{\quad} x + \underline{\quad}$$

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