Using the

Georgia Standards of Excellence

Grades 2/3
Henry County
March 14, 2016
Math Stations

Learners Advantage
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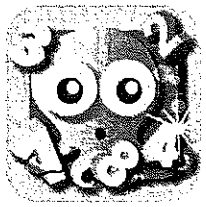
Addition & Subtraction



Activity 1: Hundreds, Tens, and Ones (Dice)

- Before play begins players need to agree on the target number and record this on their paper. This target number should be larger than the largest number possible with the dice that they are using. Players take turns to roll the dice to form a three-digit number. They then choose to add or subtract the number created. With each successive turn players add or subtract numbers to the result of their previous turn. The first player to reach the target number exactly wins.

Activity 2: Operation Roll Large Addends (Operation spinner, dice)

- Player 1 spins the operation spinner. Player 1 rolls two number dice two times. Using the numbers rolled each time, the player creates two two-digit numbers trying to form the *largest sum or difference* for the set of numbers based on the operation. Player 1 performs the operation and records the equation and answer. Player 2 repeats steps 1 through 4. Players compare their answers and the player with the *largest* sum or difference earns one point for that round. At the end of 5 rounds, students find the sum of all the answers.

Activity 3: Money Trade In (Versions 1, 2, 3) (Money spinner, counters)

- Player 1 spins the money spinner, they will then use their counters to cover that coin amount. Player 2 spins and on their board they will use their counters to cover the coin amount that they rolled. This play will continue for each player. As each player spins, they will continue to add on to their total, trading up small coin amounts for larger coins. Ex: When a player has 5 pennies and 1 nickel covered up, they can trade their counters up for a dime. All trade-ins should happen on their turn. The goal of the game is to be the first player to trade up to $5.
- Each player starts with one counter on the $5 bill. Player 1 spins the money spinner, they will then subtract that amount from their $5. This will require trading in their $5 for smaller bills and coins. Player 2 spins and will also subtract the amount from their $5. As each player spins, they will continue to subtract from their total, each time counting down. The goal of the game is to be the first player to spend all their money down to zero.
- Each player will cover $2 and 50¢ on their boards. This can be created by any combination of coins and bills that the player decides. Player 1 spins the money spinner and the operation spinner. The operation spinner determines if the player will add or subtract the money amount that they spun. This play will continue for each player. As each player spins, they will continue to add on or subtract from their total, trading up to larger coins or trading down to smaller coins of equal value. Ex: When a player has 5 pennies and 1 nickel covered up, they can trade their counters up for a dime. All trade-ins should happen on their turn. The goal of the game is to be the first player to reach $5.

Activity 4: Close to Zero (deck of cards)

- Shuffle the cards and place them face down. Take 6 cards each from the top of the stack and use them to create a subtraction problem with two 3-digit numbers. Arrange your cards to make a difference as close to zero as possible. Record and solve your subtraction problem. The player with the difference closest to zero scores one point. The player with the most points after five rounds wins the game.

Activity 5: Close to One Hundred (deck of cards)

- Shuffle the cards and put them face down in a stack, each player takes 4 cards and uses them to create an addition problem with two 2-digit numbers. Arrange them to make a sum as close to 100
- Solve the addition problem; The player with the most points after 5 rounds wins.

Hundreds, Tens and Ones

Purpose: The purpose of this activity is to help your students practice adding and subtracting with hundreds, tens, and ones.

What you need:

- Dice (the dice used could vary from student to student to differentiate)
- pen and paper for each player

What to do:

- Before play begins players need to agree on the target number and record this on their paper. This target number should be larger than the largest number possible with the dice that they are using.
- Players take turns to roll the dice to form a three-digit number. They then choose to add or subtract the number created.
- With each successive turn, players add or subtract numbers to the result of their previous turn.
- The first player to reach the target number exactly wins.

What to expect your child to do:

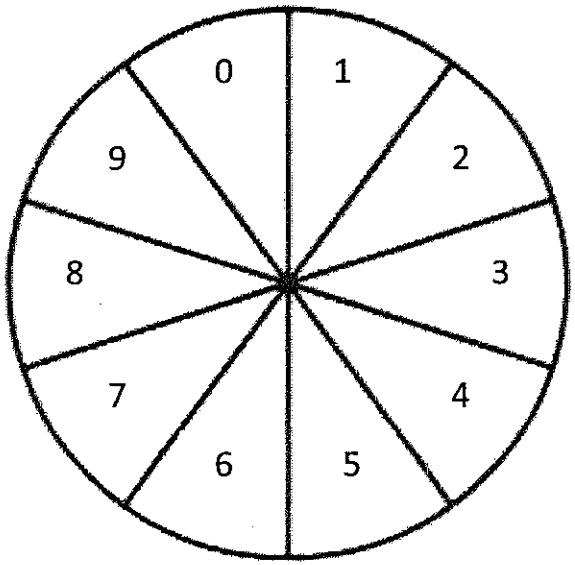
- Understand place value so that hundreds, tens, and ones can be added by using this understanding.
- Consider how much more is required to reach the goal number.

Hundreds, Tens, and Ones

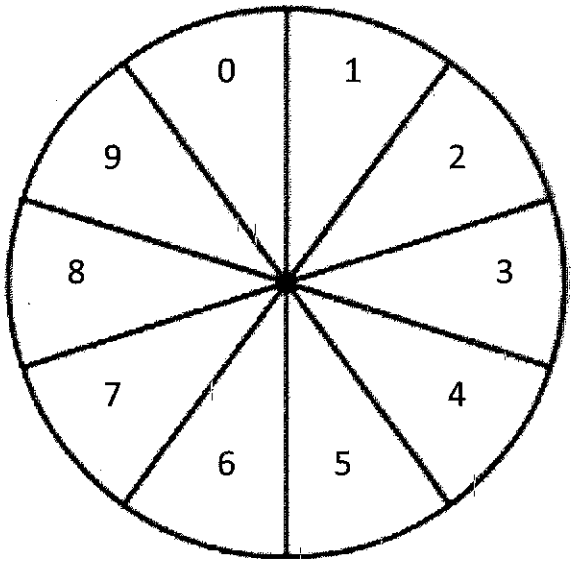
Our Goal Number: _____

Operation	Number Spun	Total

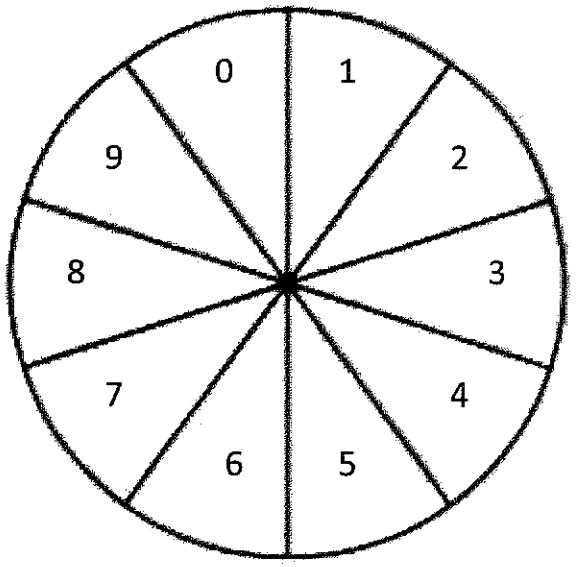
Operation	Number Spun	Total



Hundreds

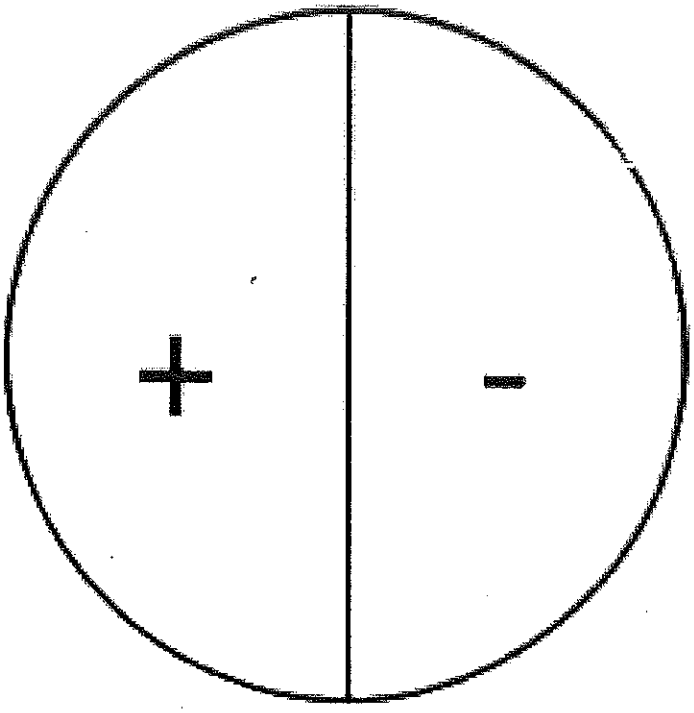


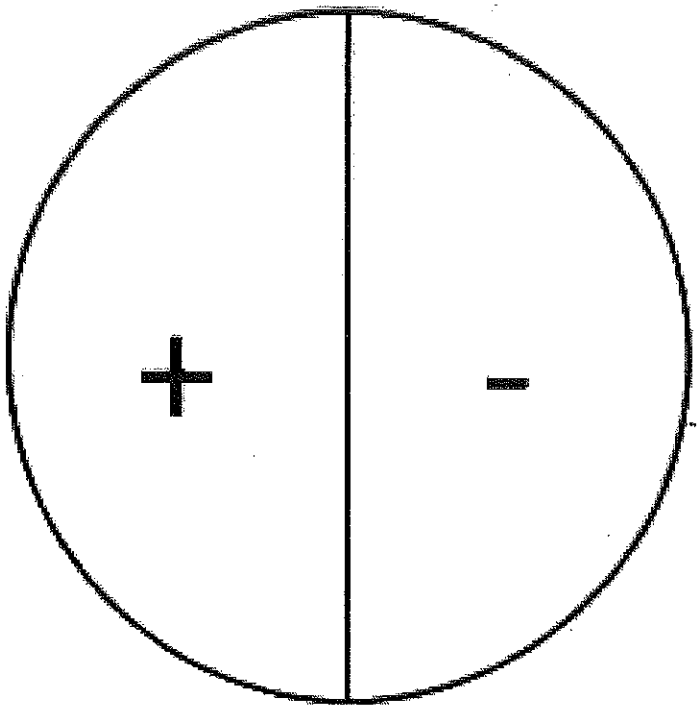
Tens

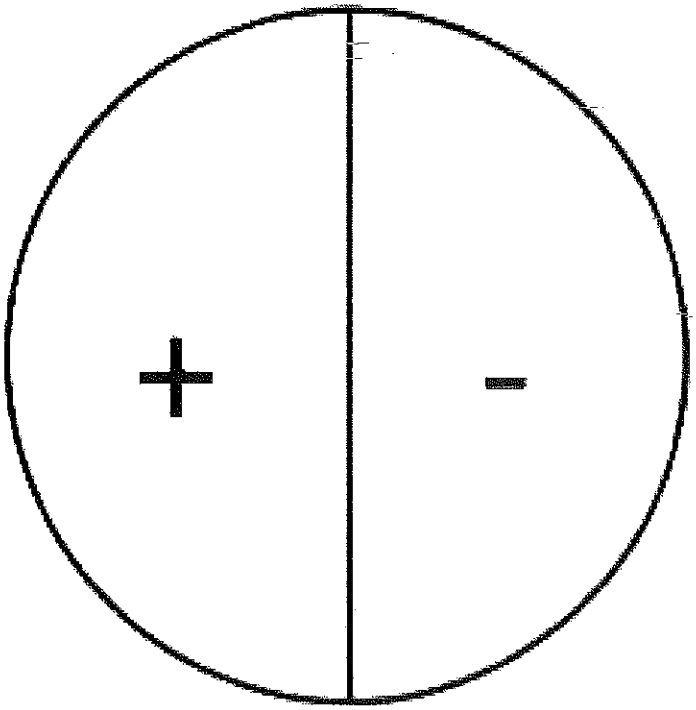


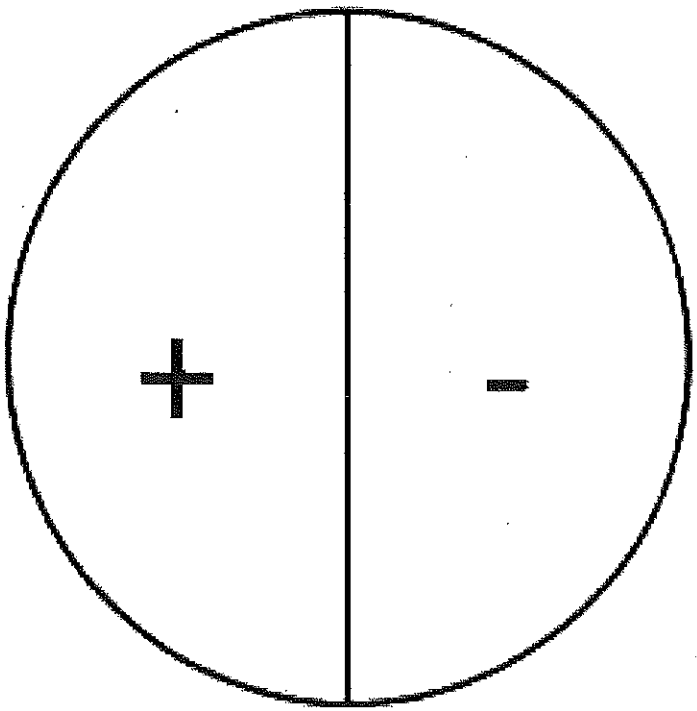
Ones

Hundreds, Tens, and Ones Spinners









Operation Roll Large Addends

Operation spinner, dice)

- Player 1 spins the operation spinner.
- Player 1 rolls two number dice two times.
- Using the numbers rolled each time, the player creates two two-digit numbers trying to form the *largest sum or difference* for the set of numbers based on the operation.
- Player 1 performs the operation and records the equation and answer.
- Player 2 repeats steps 1 through 4.
- Players compare their answers and the player with the *largest* sum or difference earns one point for that round.
- At the end of 5 rounds, students find the sum of all the answers.

Money Trade In

Materials: counters, spinner

Version 1

- Player 1 spins the money spinner, they will then use their counters to cover that coin amount.
- Player 2 spins and use their counters to cover the coin amount that they rolled.
- Play continues for each player.
- As each player spins, continue to add on to your total, trading up small coin amounts for larger coins. Ex: When a player has 5 pennies and 1 nickel covered up, they can trade their counters up for a dime. All trade-ins should happen on their turn.
- The goal of the game is to be the first player to trade up to $5.

Version 2

- Each player starts with one counter on the $5 bill.
- Player 1 spins the money spinner, and subtracts that amount from the $5. This will require trading in their $5 for smaller bills and coins.
- Player 2 spins and also subtracts the amount from their $5. As each player spins, they will continue to subtract from their total, each time counting down. The goal of the game is to be the first player to spend all their money down to zero.
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Version 3

- Each player will cover $2 and 50¢ on their boards. This can be created by any combination of coins and bills that the player decides.
- Player 1 spins the money spinner and the operation spinner. The operation spinner determines if the player will add or subtract the money amount that they spun.
- Play will continue for each player. As each player spins, they will continue to add on or subtract from their total, trading up to larger coins or trading down to smaller coins of equal value. Ex: When a player has 5 pennies and 1 nickel covered up, they can trade their counters up for a dime. All trade-ins should happen on their turn.
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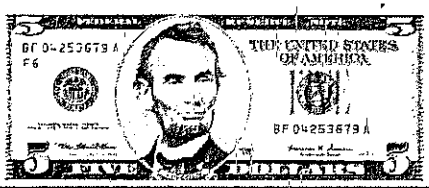
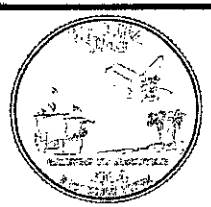

THE UNITED STATES OF AMERICA
FIVE DOLLARS

ONE

THE UNITED STATES OF AMERICA

THE UNITED STATES OF AMERICA
ONE DOLLAR

ONE



LIBERTY

ONE DIME

LIBERTY

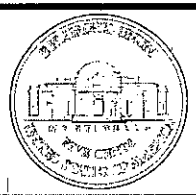
ONE DIME

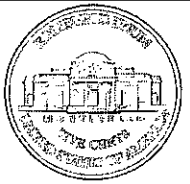
LIBERTY

ONE DIME

FIVE CENTS

FIVE CENTS


FIVE CENTS


FIVE CENTS

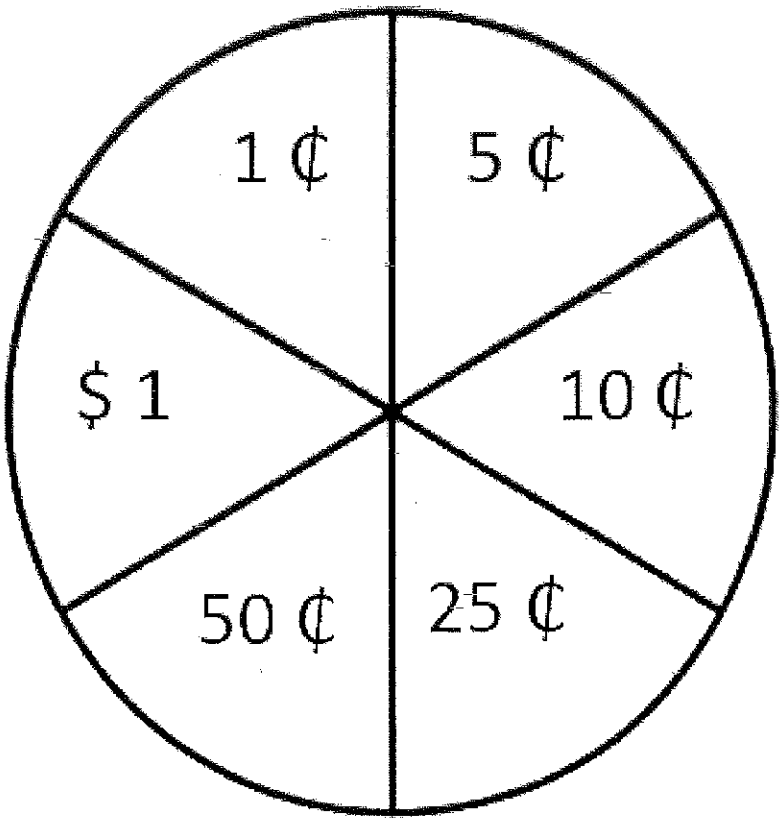
ONE CENT

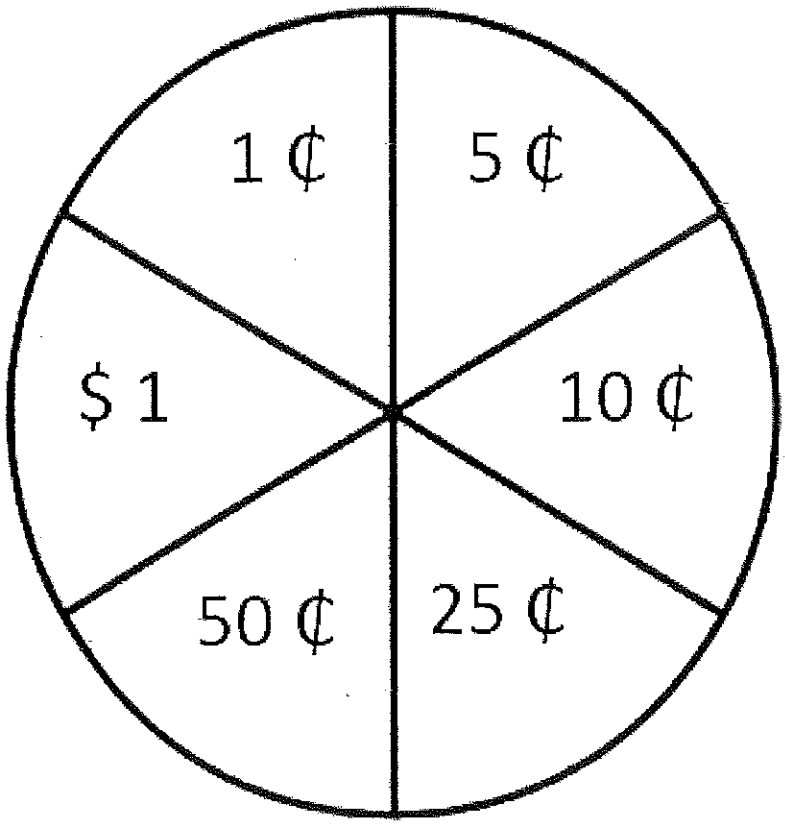
ONE CENT

ONE CENT

ONE CENT

ONE CENT


1 ¢
5 ¢
$ 1
10 ¢
50 ¢
25 ¢

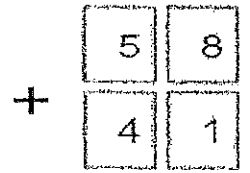

1 ¢
5 ¢
$ 1
10 ¢
50 ¢
25 ¢

Close to Zero

Materials: Deck of cards

- Shuffle a deck of cards and place them face down in a stack.
- Take 6 cards each from the top of the stack and use them to create a subtraction problem with two 3-digit numbers.
- Arrange your cards to make a difference as close to zero as possible.
- Record and solve your subtraction problem.
- The player with the difference closest to zero scores one point.
- The player with the most points after five rounds wins the game.

Close to One Hundred



Materials: Number cards 0-9 (4 of each), calculator

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1. Shuffle the cards and place them facedown in a stack.

2. Each player takes 4 cards from the top of the stack and uses them to create an addition problem with two 2-digit numbers. Arrange your cards to make a sum as close to one hundred as possible.

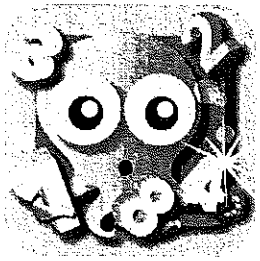
3. Record and solve your addition problem.

4. Use a calculator to check each other's work. The player with the sum closest to one hundred scores one point.

5. The player with the most points after five rounds wins the game.

1	2
3	4
5	6
7	8
9	0

Fact Fluency



Activity 1: Clear the Board (counters, dice)

- Using 10 counters, place them on the game board (one in each square) above the numbers you think will be easiest to roll. Roll 2 die and spin the operation spinner. If you roll a number that has a counter above it, remove the counter. If there isn't a counter above your number, it's the other players turn. Play until one player clears the board first.

Activity 2: Nine Pebbles Round (counters/pebbles)

- Player A begins by placing three pebbles on each of the squares labeled "x 2, x 7, x 9" as shown in the figure.
- Player B must then pick up all the pebbles from any one of the three squares and, moving clockwise around the board, place one pebble in each square.
- It is the last square that is important for the purpose of scoring.
- Player B must count the number of pebbles in the last square and multiply it by the number written on the square. For example, if Player B begins by taking all three pebbles from the square marked "x 7," he places one pebble on square "x 6," one on square "x 9" and the final pebble on square "x 8." Since this is the only pebble on square x 8 his score is 1 x 8 or 8.
- The game proceeds with player A taking all the pebbles from any square on the revised board and repeating the one pebble in each square process and then calculating his score.

Activity 3: Double Up!

- Take turns spinning the spinner, Double the number and place a counter on the doubled number
- The first one to get three in a row wins

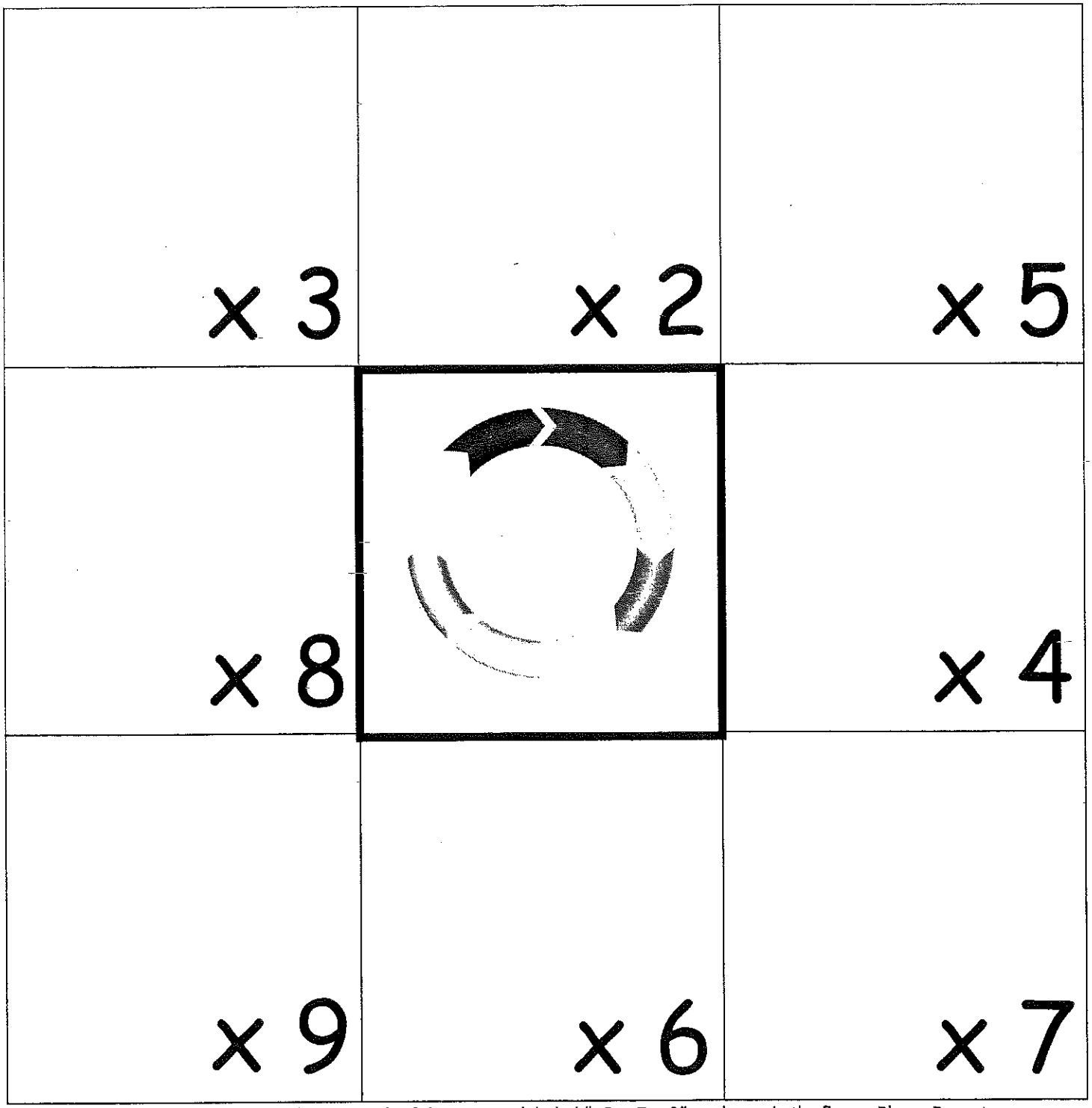
Clear the Board

2	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***

Materials: 2 dot dice, 10 counters of one color for each player, 1 operation spinner

Players: 2**Directions:** Using 10 counters, place them on the game board (one in each square) above the numbers you think will be easiest to roll. Roll 2 die and spin the operation spinner. If you roll a number that has a counter above it, remove the counter. If there isn't a counter above your number, it's the other players turn. Play until one player clears the board first.

Nine Pebbles



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Double Up!

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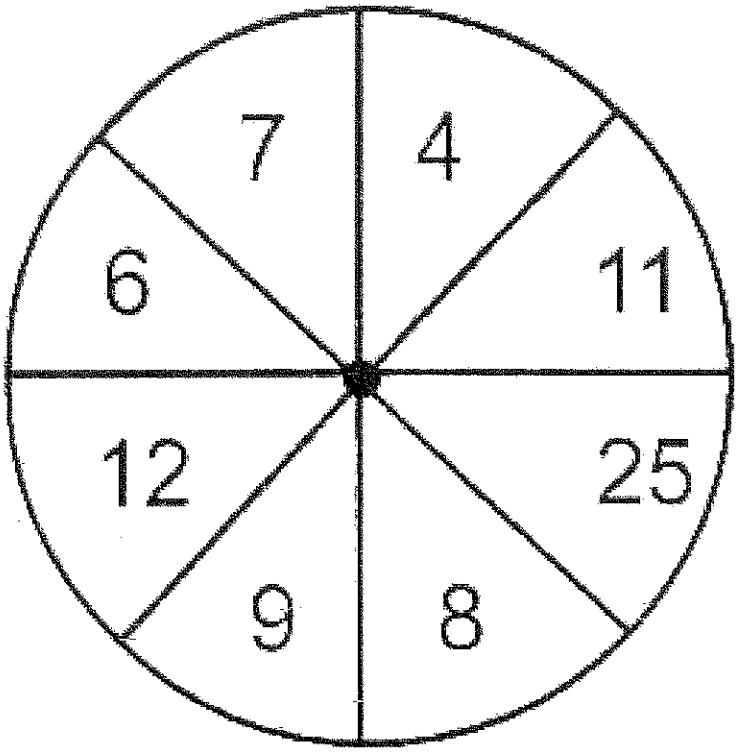
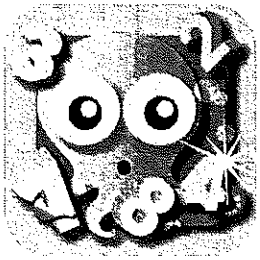


8	18	12	14	16
16	50	8	50	18
22	14	22	12	24
8	24	12	18	16
50	18	14	24	22

Fractions



Activity 1: Fraction Barrier Game (grids)

- Work with a partner facing one another with a divider standing between you. Player 1: Shade in a fraction of each shape on your grid without letting your partner see your work. Label each fraction. Give instructions to your partner on how to shade in and label a fraction of each shape to match your grid. Remove the divider and look at the two grids to see how closely they match. Switch roles and play again.

Activity 2: Equivalence Go Fish (fraction cards)

- Deal five cards to each player. The rest of the cards are put in the middle as the draw pile. If any player has any matches, they are able to put them down. Players will take turns asking one another for an equivalent match for a fraction they have in their hand. If a match is given, they are able to put it down and ask for another. If no match is given, the player must "Go Fish" from the draw pile. Play continues until the "pond" is depleted. The player with the most equivalent matches wins!

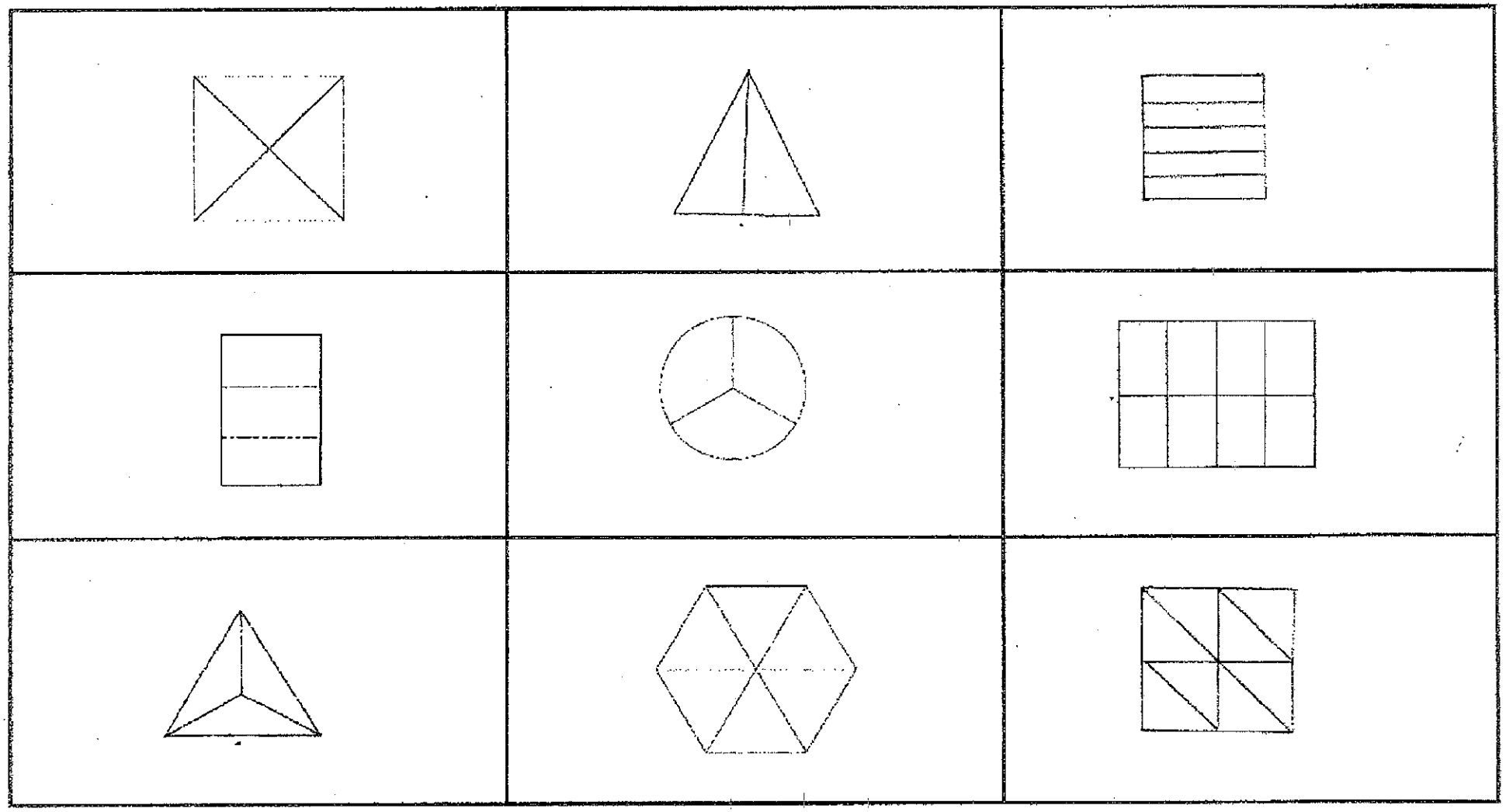
Activity 3: More or Less (counters, denominator spinner)

- A collection of 5 counters will be in between both players. These will be the points.
- One player will spin the denominator spinner to determine the fraction denominator for that round.
- Each player will flip over one card, which will be their numerator.
- He/she will write their fraction on their recording sheet and represent their fraction on their number line.
- Players will compare their fractions to determine whose fraction is greater.
- The player with the greater fraction will take one counter ("point").
- Repeat the rounds until all five counters are gone.
- The player with the most counters is the winner!

Fraction Barrier Game (grid)

- Work with a partner facing one another with a divider standing between you.
- Player 1: Shade in a fraction of each shape on your grid without letting your partner see your work.
- Label each fraction.
- Give instructions to your partner on how to shade in and label a fraction of each shape to match your grid.
- Remove the divider and look at the two grids to see how closely they match.
- Switch roles and play again.

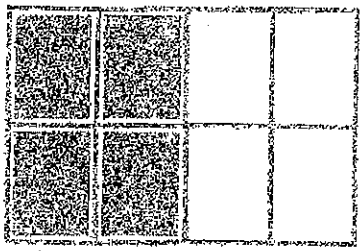
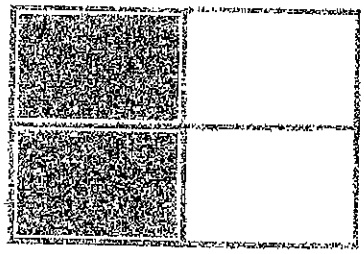
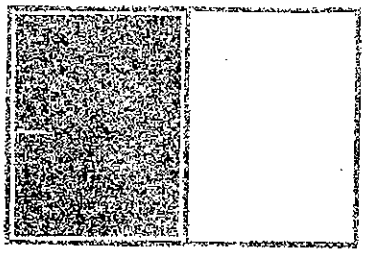
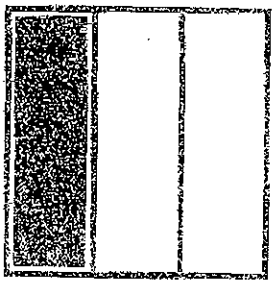
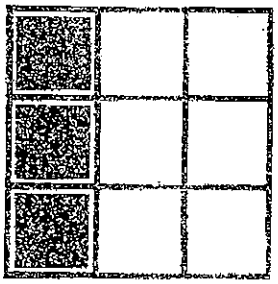
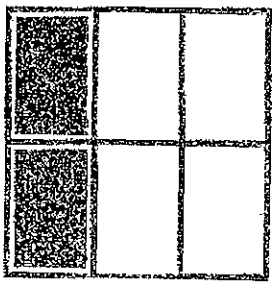
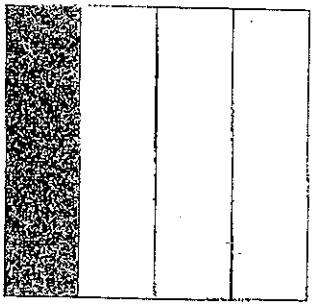
Fraction Barrier Game

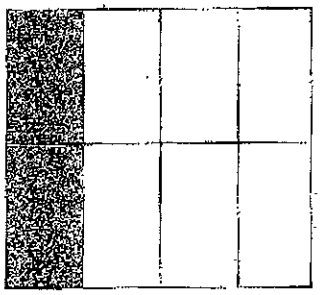


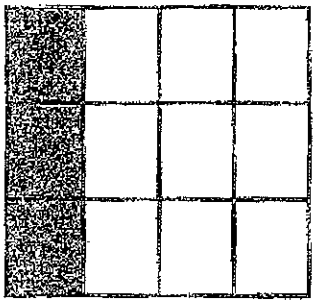
Equivalence Go Fish

Materials: Fraction Cards

- Deal five cards to each player.
- The rest of the cards are put in the middle as the draw pile.
- If any player has any matches, put them down.
- Players will take turns asking one another for an equivalent match for a fraction they have in their hand.
- If a match is given, they are able to put it down and ask for another.
- If no match is given, the player must "Go Fish" from the draw pile.
- Play continues until the "pond" is depleted.
- The player with the most equivalent matches wins!

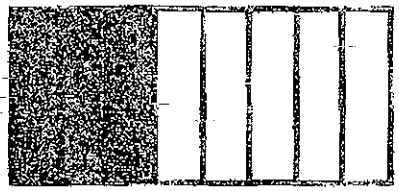
	$\frac{1}{2}$	
		$\frac{1}{3}$
		

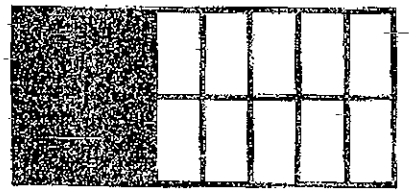


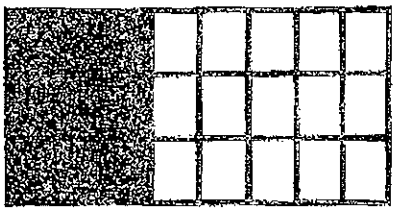


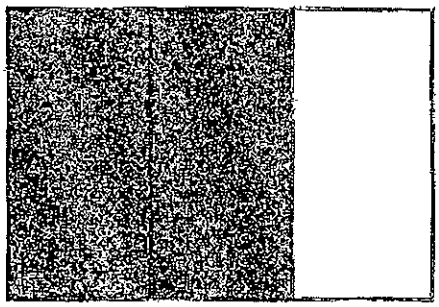
$\frac{1}{4}$

$\frac{3}{8}$

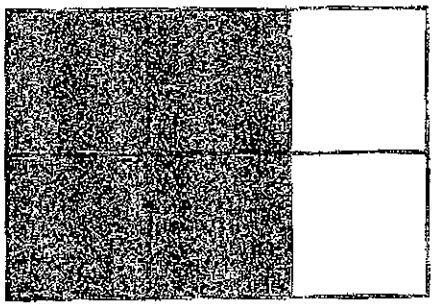
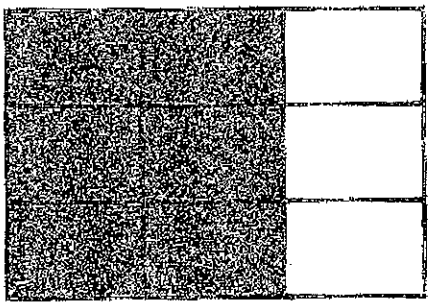
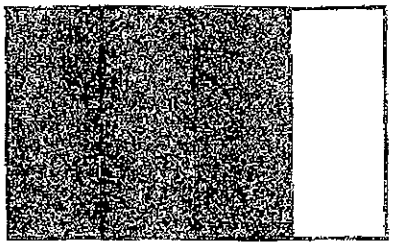
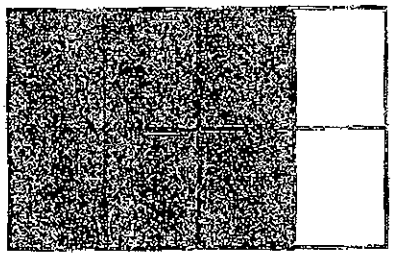
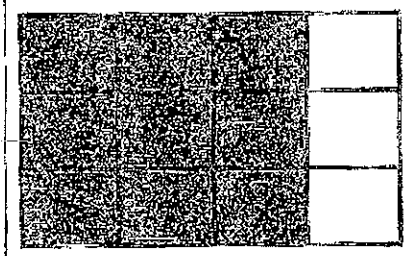
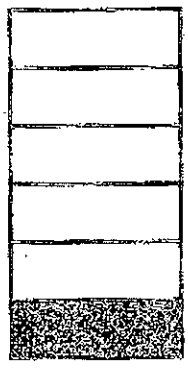
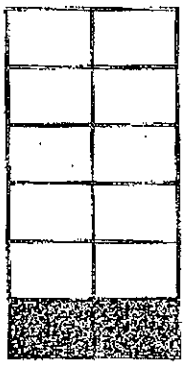


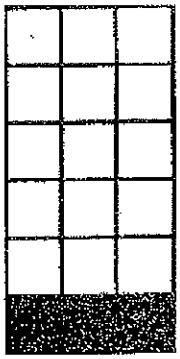




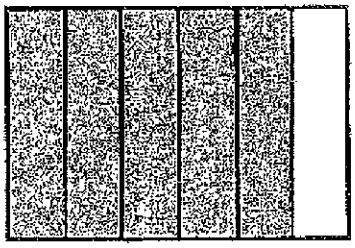


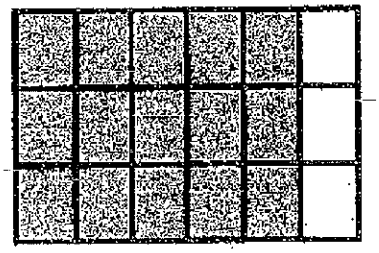
$\frac{2}{3}$

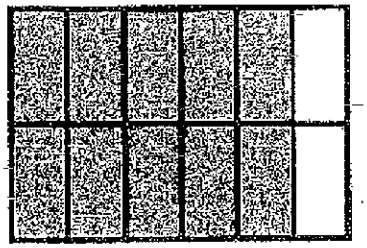
		
		$\frac{3}{4}$
	$\frac{1}{6}$	



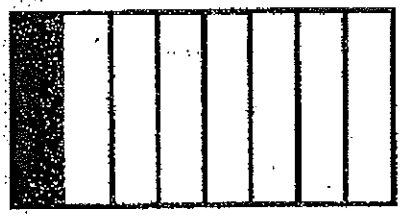
$\frac{5}{6}$



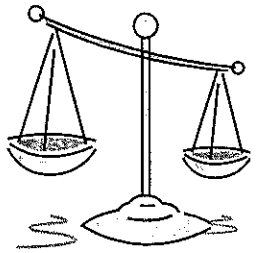




$\frac{1}{8}$



More or Less?

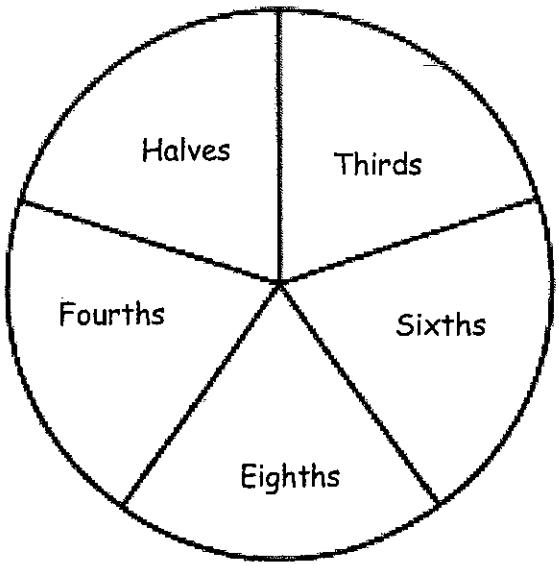


Materials: deck of cards, denominator spinner, recording sheet, 5 counters

Players: 2

Directions:

- A collection of 5 counters will be in between both players. These will be the points. One player will spin the denominator spinner to determine the fraction denominator for that round.
- Each player will flip over one card, which will be their numerator. He/she will write their fraction on their recording sheet and represent their fraction on their number line.
- Players will compare their fractions to determine whose fraction is greater. The player with the greater fraction will take one counter ("point").
- Repeat the rounds until all five counters are gone. The player with the most counters is the winner!



More or Less Recording Sheet

Round 1

Fraction: _____

Represent it on the number line

Round 2

Fraction: _____

Represent it on the number line

Round 3

Fraction: _____

Represent it on the number line

Round 4

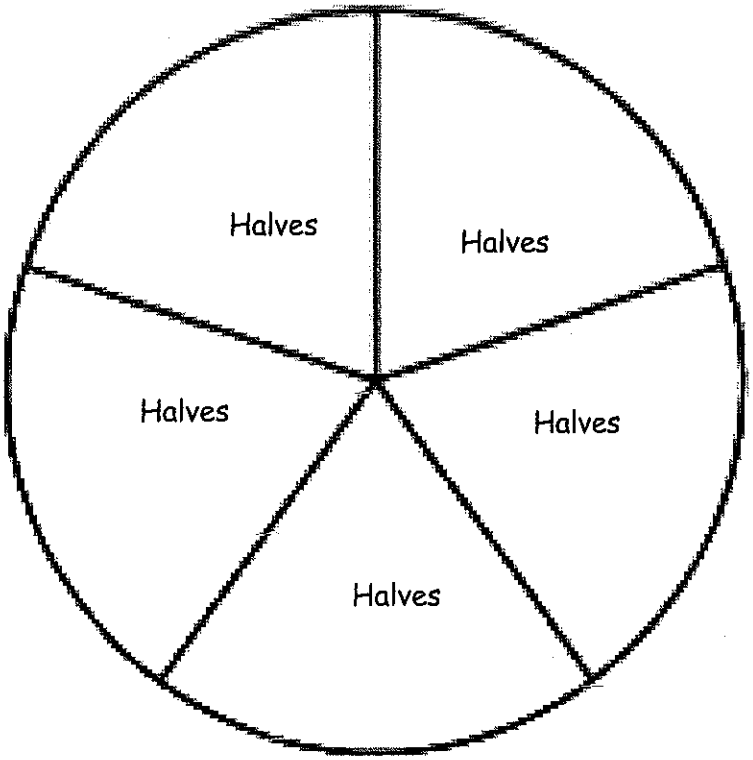
Fraction: _____

Represent it on the number line

Round 5

Fraction: _____

Represent it on the number line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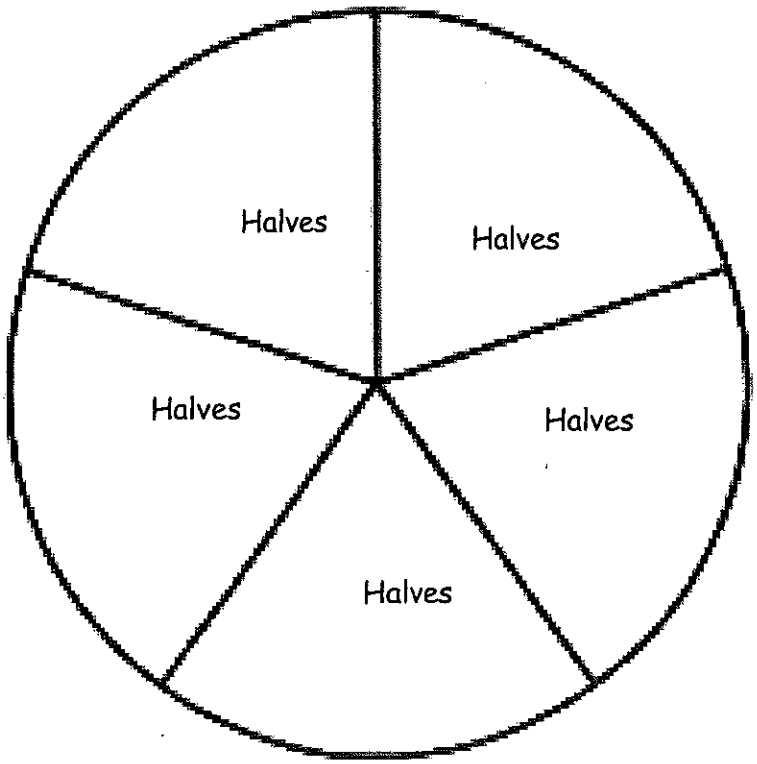
Halves
Halves
Halves
Halves


Halves
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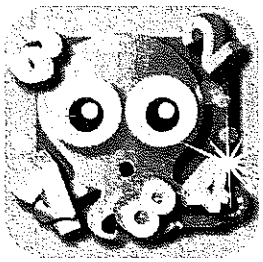
Halves

Place Value



Activity 1: Order Up! (deck of cards)

- Work with a partner. Shuffle the cards and give 5 to each player. Without turning them up each player places the cards in a vertical row in front of him/her, and then turns the cards face up. Take turns drawing a card from the draw pile. On each turn, the player may replace any card in his or her column with the drawn card or discard the drawn card. The player may not move cards around within the column. Keep going until one player has 5 numbers in order from lowest to highest (the numbers do not need to be sequential, but they must be in order)

Activity 2: Largest Number Wins (Versions 1, 2) (deck of cards)

- Shuffle the cards and leave them face down in a deck on the table. Players take turns to draw a card from the top of the deck and place it in front of them on their chart. Once a card has been placed, it cannot be changed. After both players have their chart completed, the person with the larger number wins!

Activity 3: Fill the Ladder (place value spinner)

- Players will take turns spinning the place value spinners. They will write the number created on one of the rungs of the ladder. Once a number has been placed, it cannot be moved. The first player who is able to fill in all of the rungs of their ladder with numbers from least to greatest is the winner.

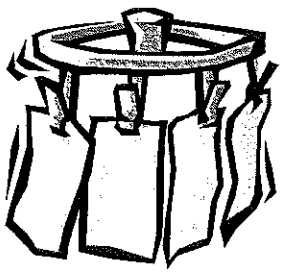
Activity 4: Rounding Bingo (numeral cards, counters

- Use the 5 x 5 board with a "free" space in the middle box. Place numbers inside the boxes that are related to how you want to round. For example, if you are rounding to the nearest 10, then put the multiples of 10 in the boxes: 0, 10, 20, 30, etc. The first player must draw two cards and decide which two-digit number is represented by those cards. If a 6 and a 2 are pulled, the number to round could be either 62 or 26. The player should put a chip on 60 if 62 was chosen or 30 if 26 was chosen. The next player draws two cards and decides what number to round to, then puts the chip on his or her board. A player only puts a chip on his or her own board when he or she pulled the cards. The first player to get five in a row, column or diagonal is the winner.

Activity 5: Rounding War (deck of cards)

- Shuffle a deck of cards. Equally divide the deck of cards into two piles, one for each player. Players leave the deck face down and will choose cards from the top of their deck for each hand. Before the game begins, the players must choose whose cards have the tens place value and whose cards have the ones place value. The suit of the cards does not matter. At the same time, each player lays down a card and rounds the number that is created by those cards. For example, player one (tens place) pulls a 2 and player two (ones place) pulls a 4. The number created is 24 and the first player to call out 20 wins both cards. In case of a tie, players each take their own card back and places it on the bottom of the deck. The game continues at a fast pace until a player runs out of cards. When that occurs, the other player holding all of the cards wins the game. Depending on how difficult the players want the game to be, they can either leave in or take out the face cards. The Ace is worth 1, the Jack is 11, the Queen is 12, and the King is 13. If player one (tens place) pulls out a Jack, 11, and player two (ones place) pulls out a 5, then the number to round is 115. The first player to call out 120 wins both cards.

Order Up

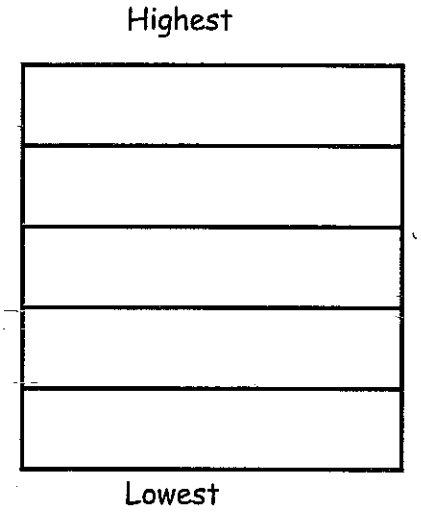


Materials: numeral cards 101-120 (or any sequence of 20 numeral cards)

Players: 2

Directions:

1. Work with a partner. Shuffle the cards and give 5 to each player. Without turning them up each player places the cards in a vertical row in front of him/her, and then turns the cards face up.



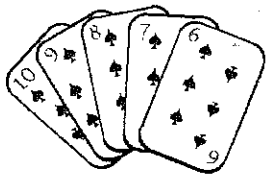
2. Take turns drawing a card from the draw pile. On each turn, the player may replace any card in his or her column with the drawn card or discard the drawn card. The player may not move cards around within the column.

3. Keep going until one player has 5 numbers in order from lowest to highest (the numbers do not need to be sequential, but they must be in order).

101	102
103	104
105	106
107	108
109	110

111	112
113	114
115	116
117	118
119	120

Largest Number Wins!



Version 1

Purpose: The purpose of this activity is for students to better understand place value and to compare numbers.

Players: Partners

Materials: Numbered playing cards using only A-9

Directions:

1. Shuffle the cards and leave them face down in a deck on the table.
2. Players take turns to draw a card from the top of the deck and place it in front of them on their chart.
3. Once a card has been placed, it cannot be changed.
4. After both players have their chart completed, the person with the larger number wins!

Largest Number Wins!

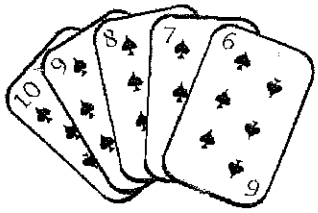
tens	ones

Player 1

tens	ones

Player 2

Largest Number Wins!



Version 2

Purpose: The purpose of this activity is for students to better understand place value and to compare numbers.

Players: Partners

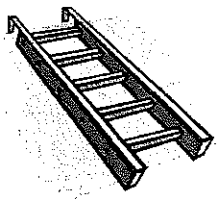
Materials: Numbered playing cards using only A-9

Directions:

1. Shuffle the cards and leave them face down in a deck on the table.
2. Players take turns to draw a card from the top of the deck and place it in front of them on their chart. Once a card has been placed, it cannot be changed.
3. After both players have their chart completed, the person with the larger number wins!

	hundreds	tens	ones
Player 1			
Player 2			

Fill the Ladder

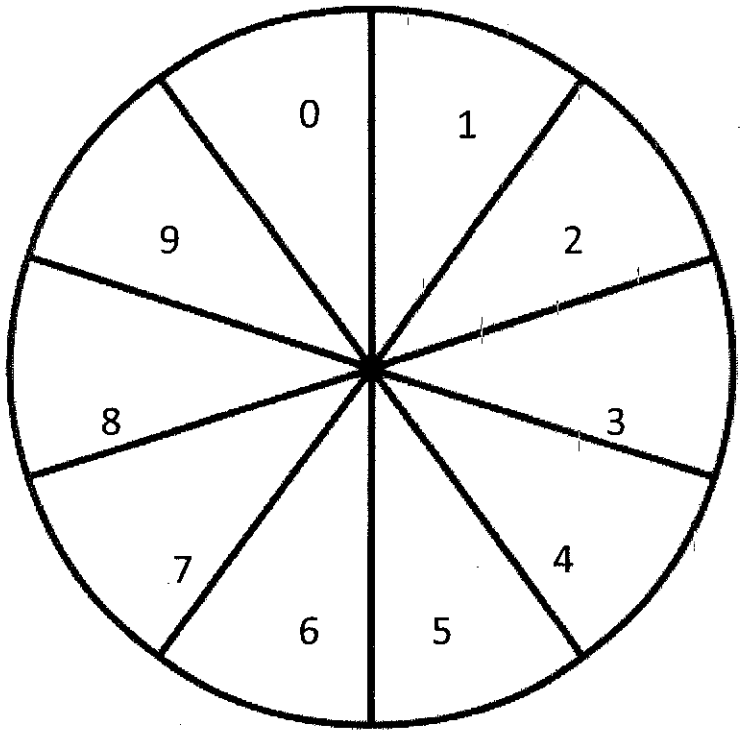


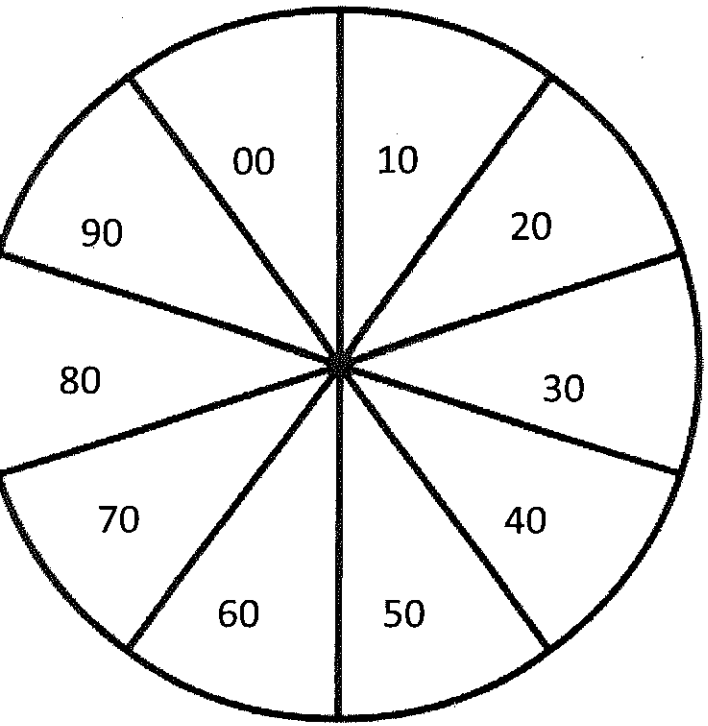
Greatest

Least

Materials: place value spinner, recording sheet (1 per player)

Directions: Players will take turns using the place value spinner. They will write the number created on one of the rungs of the ladder. Once a number has been placed, it cannot be moved. The first player who is able to fill in all of the rungs of their ladder with numbers from least to greatest is the winner.


0
1
2
3
4
5
6
7
8
9


00
10
20
30
40
50
60
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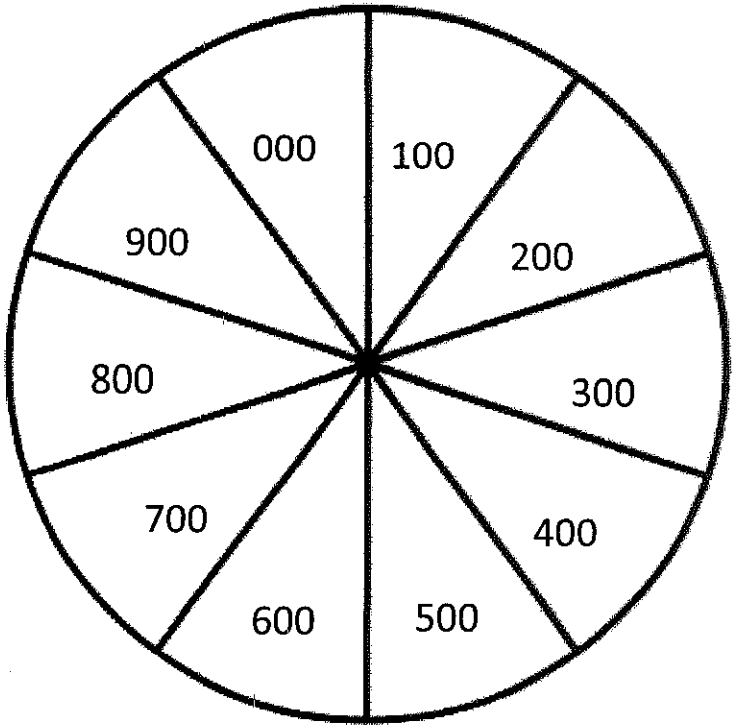
80
90


000
100
200
300
400
500
600
700
800
900

Rounding Bingo

Materials: deck of cards (A-9 only), bingo game board, counters

Directions: Use the 5 x 5 board with a "free" space in the middle box. Place numbers inside the boxes that are related to how you want to round. For example, if you are rounding to the nearest 10, then put the multiples of 10 in the boxes: 0, 10, 20, 30, etc. The first player must draw two cards and decide which two-digit number is represented by those cards. If a 6 and a 2 are pulled, the number to round could be either 62 or 26. The player should put a chip on 60 if 62 was chosen or 30 if 26 was chosen. The next player draws two cards and decides what number to round to, then puts the chip on his or her board. A player only puts a chip on his or her own board when he or she pulled the cards. The first player to get five in a row, column or diagonal is the winner.

**Students are expected to justify their reasoning for placing a chip on a number.

		FREE SPACE ☺		

Rounding War

(deck of cards)

- Shuffle a deck of cards.
- Equally divide the deck of cards into two piles, one for each player. Players leave the deck face down and will choose cards from the top of their deck for each hand.
- Before the game begins, the players must choose whose cards have the tens place value and whose cards have the ones place value.
- The suit of the cards does not matter.
- At the same time, each player lays down a card and rounds the number that is created by those cards.
- For example, player one (tens place) pulls a 2 and player two (ones place) pulls a 4. The number created is 24 and the first player to call out 20 wins both cards.
- In case of a tie, players each take their own card back and places it on the bottom of the deck.
- The game continues at a fast pace until a player runs out of cards.
- When that occurs, the other player holding all of the cards wins the game.
- Depending on how difficult the players want the game to be, they can either leave in or take out the face cards.
- The Ace is worth 1, the Jack is 11, the Queen is 12, and the King is 13.
- If player one (tens place) pulls out a Jack, 11, and player two (ones place) pulls out a 5, then the number to round is 115. The first player to call out 120 wins both cards.