

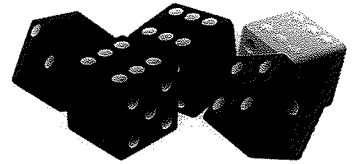


**Players:** 2-4

**Materials:** 5 dice for each player

**How to Play:**

- Give each player five dice to roll. Add any die which appears more than once. The score for the sample to the right would be 18 ( $6+6+6$ , or  $3 \times 6$ ), but the score for a roll of 6, 6, 6, 3, 3 would be 24 ( $6+6+6+3+3$ ).
- Play five rounds in all, and add the scores to determine the winner.



**Variations:**

- Play with more dice to provide for more addition and multiplication practice.
- Use ten sided dice (1-10). This adaption will yield higher scores and more difficult practice.

3.OA.8



# 500 and Out



**Topic:** 2- and 3-digit subtraction

**Object:** Subtract until you reach zero.

**Groups:** Small groups or pair players

## Materials

- 2 number cubes (for each group)
- Paper and pencil (for each player)

## Directions

1. The first player rolls the two number cubes to form a two-digit number and subtracts this number from 500. The player records the difference.
2. Each other player, in turn, rolls the number cubes, forms a new two-digit number, and subtracts it from 500.
3. For the second turn, each player rolls the number cubes, forms a new two-digit number, and subtracts it from the existing difference.
4. For the remaining turns, each player decides whether to subtract a one-digit or two-digit number. The player rolls the appropriate number of cubes. Players keep taking turns until someone reaches zero. If a player rolls a number greater than the remaining difference, the player skips that turn.
5. The first player to reach zero wins the game.

## Making Connections

Promote reflection and make mathematical connections by asking:

- When and why did you use only one cube?
- At what point did you decide to stop rolling? Why?

### KEY STANDARD

Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (3.NBT.A.2)

**Tip** Use three number cubes to play "1,000 and Out." Players make 3-digit numbers to subtract from 1,000. Players need to decide when to start subtracting 1-digit and 2-digit numbers.

$$\begin{array}{r} 500 \\ - 25 \\ \hline 475 \\ - 71 \\ \hline 404 \end{array}$$





# "What's the Difference?"

**Players:** 2 players

**Materials:** "What's the Difference?" spinner  
Ace - 9 cards  
Optional - Student-made place value mat - Cut 11 x 7-inch paper in half lengthwise to create two mats. Fold mats in half widthwise and then into thirds to make 6 columns. Use 5 of the columns.

**Objective:** Find the sum or difference that best matches the target.

## How to Play:

- Player spins to determine the target of the game.
- Players take turns. On your turn:
  - Draw and place five cards, one card at a time, to make a 5-digit number.
  - Place each card in a different place value position.
  - Once you place a card on the place value mat, it cannot be moved.
- On your next turn, draw a sixth card. You may use it to replace one of the cards already placed, or you may discard it.
- On your next turn, repeat these steps to make the second 5-digit number.
- Finally, both players perform the operation indicated on the spinner target. When subtracting, remember to subtract the smaller number from the larger number.
- Check your work. The player with the answer closest to the target wins the round.

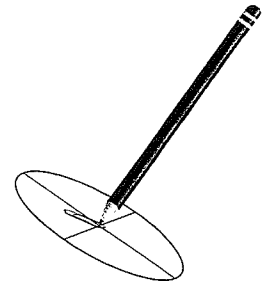
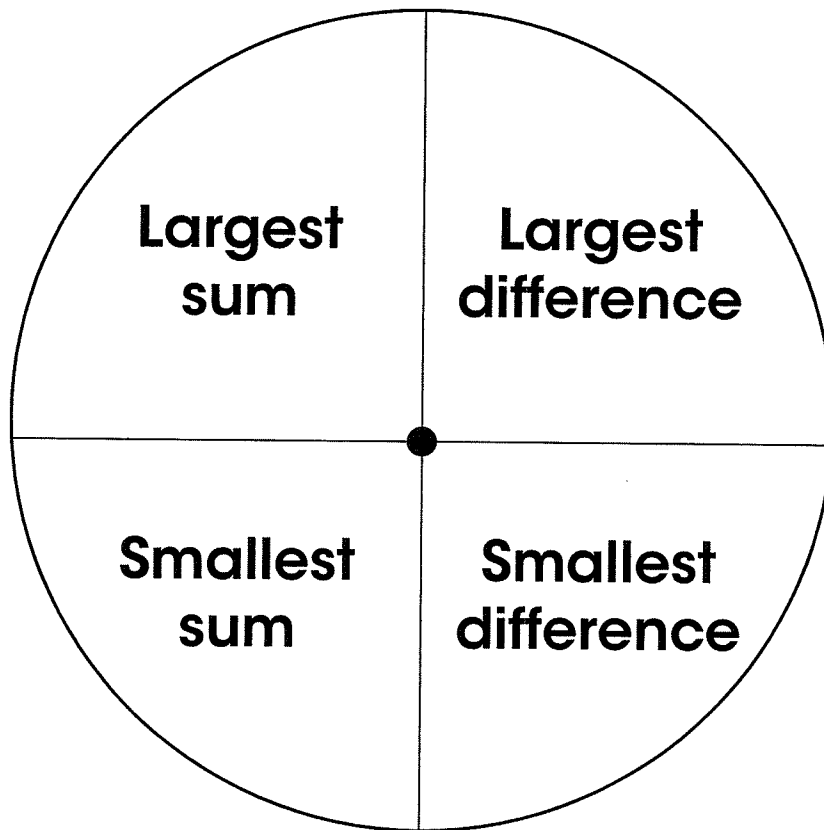
## Variations:

- More Support - Start with a place value mat that only goes to hundreds or thousands.
- More challenge (above grade level)- Make six-digit numbers.
- Advanced Challenge (above grade level) - Make decimal numbers that include tenths and hundredths.

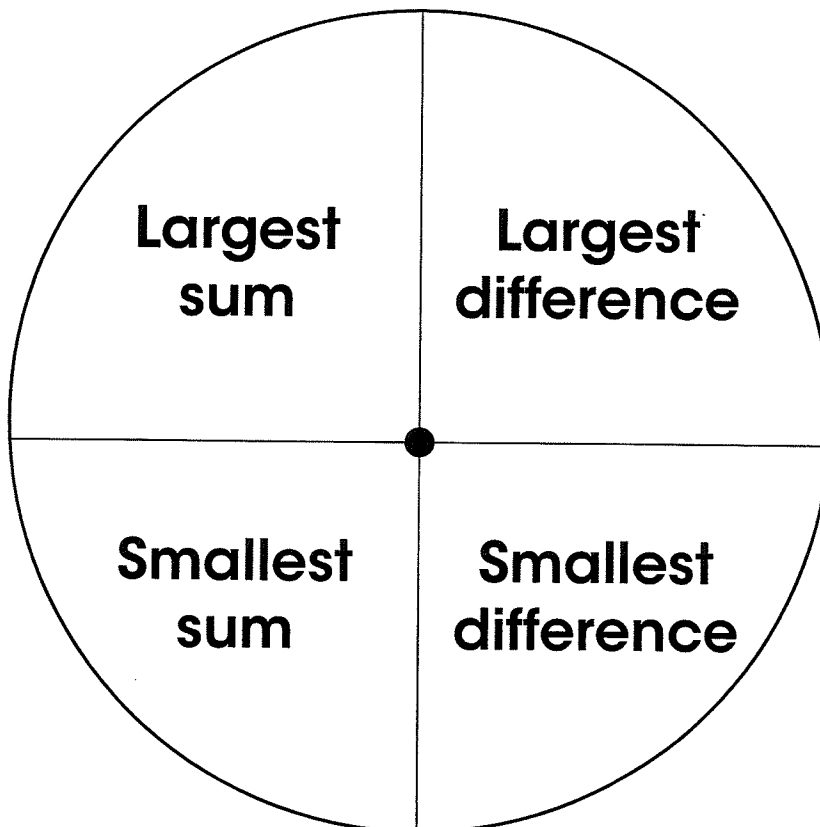
4.NBT.4



# “What’s the Difference” Spinner (Game 4-3)

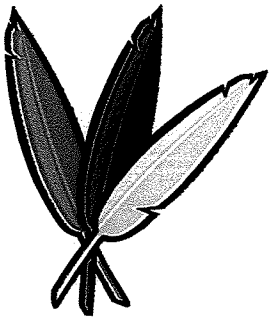


To use the spinner, place a pencil tip through a paper clip.









## Salute/Head Feathers



- Players:** 3 of equal ability
- Materials:** Deck of cards with numbers 2-10, Aces which are 1, and face cards are 10
- Object:** To be the first of the players to say what number is on their forehead
- How to Play:** Place the cards face down. Two players draw a card but do not look at it. Players place the card on their forehead so that the other player and the third player can see the card. The third player looks at the cards, adds them, and says the sum. The players with the cards on their head need to quickly announce what number is on their head. If the player is correct they collect the two cards. Rotate players so all have the opportunity to call out the sum. The winner is the player with the most cards at the end.
- Variation:** Call out products of the "feathers."  
Designate red cards as negative and black cards as positive. Do sums or products.

\*Adapted from a presentation by John Hinton, NCTM, 2007. Game created by Dr. Constance Kamii.  
3.OA.7    3.NBT.2    4.OA.3    5.OA.1,2    7.NS.1



# War Games

- Players:** 2
- Materials:** Cards Ace (= 1) - 9 or Ace - 5, depending on grade level
- Object:** To get the highest sum and collect all of the cards
- Getting Started:** Players divide all of the cards evenly. Each player turns over two cards and adds them together. The highest sum gets all the cards. In the event of a tie WAR is declared. Each player deals out two more cards face down and then turns over two more cards. These two cards are added together. The highest sum wins all of the cards. Play continues until one player has collected all of the cards.
- Variations:**
- Players can subtract their cards instead of adding. Player with the smallest number wins. Play continues until one player has all the cards.
- Players can multiply their cards instead of adding. Player with the largest product wins. Play continues until one player has all the cards.
- Players can do integer operations with red cards as negative and black cards as positive.

\*Adapted from Shuffling Into Math, Volume 1.

1.OA.6

2.OA.2

3.OA.7

4.OA.3

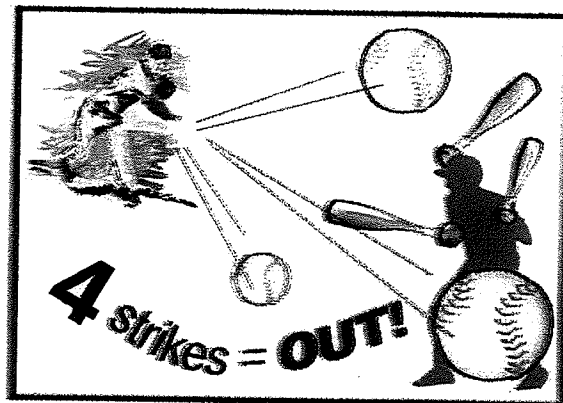
5.OA.1,2

3.NBT.2



# Four Strikes and You're Out

Players: 2 pairs - whole class



## How to Play:

- The leader creates a secret math problem and draws a blank frame on the paper and lists the numbers from 0 to 9.

For example:

$$\underline{\quad} \underline{\quad} + \underline{\quad} \underline{\quad} = \underline{\quad} \underline{\quad} \quad 0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9$$

- The other player (class) guesses a number. If that number is one of the numbers in the secret math problem then the leader will write it on the correct space or spaces. If the number is not in the problem then the player gets a strike.
- The leader will cross the guessed number off the list.
- Play continues until the player has 4 strikes or has guessed the number.

## Variations:

- Addition or subtraction with multi digit numbers works well.
- Another possible example would be a problem like  $6 \times 5 - 4 = 26$   $\underline{\quad} \times \underline{\quad} - \underline{\quad} = \underline{\quad} \underline{\quad}$

*talk it out!*

~~Blog~~

Marilyn Burns Blog about this...

# MAZITION

**SKILLS:** Addition, mental math

**OBJECT OF GAME:** To find a path of numbers that adds up to a specific sum.

**NUMBER OF PLAYERS:** One

**MATERIALS NEEDED:** Mazition game board, Scratch paper and pencil or calculator (optional), Markers

Game Board:

START	5	12	11	3	END
	8	4	15	6	
	13	10	1	14	
	2	7	16	9	

## HOW TO PLAY

1. You are on a trip from the **START** side of the maze to the **END** side. During your trip you can only move to the right, up or down. (You cannot move left or diagonally.)
2. Begin on the **START** side of the number maze.
3. Add the numbers on a path (moving right, up or down) through the squares until you reach the **END** side of the maze and one of these sums:

49 61 33 71

Remember, you must begin on the **START** side and **STOP** on the **END** side.

**HINT:** You can use more than one number on the end side.

4. Place markers on your path as you go.
5. Write number equation path for each sum.
6. Find all five paths.

### On Your Own

Create your own path to a sum. Write down the path. Ask a classmate to solve your Mazition.



# GAME BOARD

Find the sums 37, 49, 61, 33 and 71 in this math maze.

START				
5	12	11	3	
8	4	15	6	
13	10	1	14	
2	7	16	9	
END				

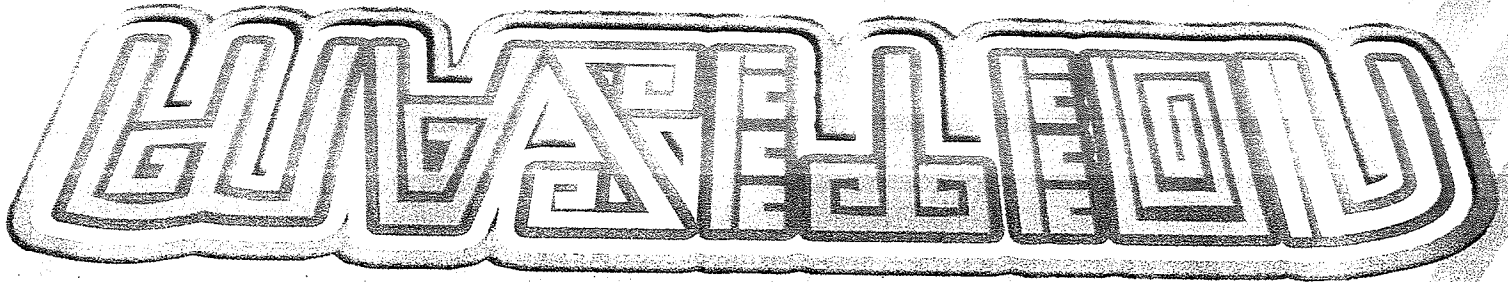
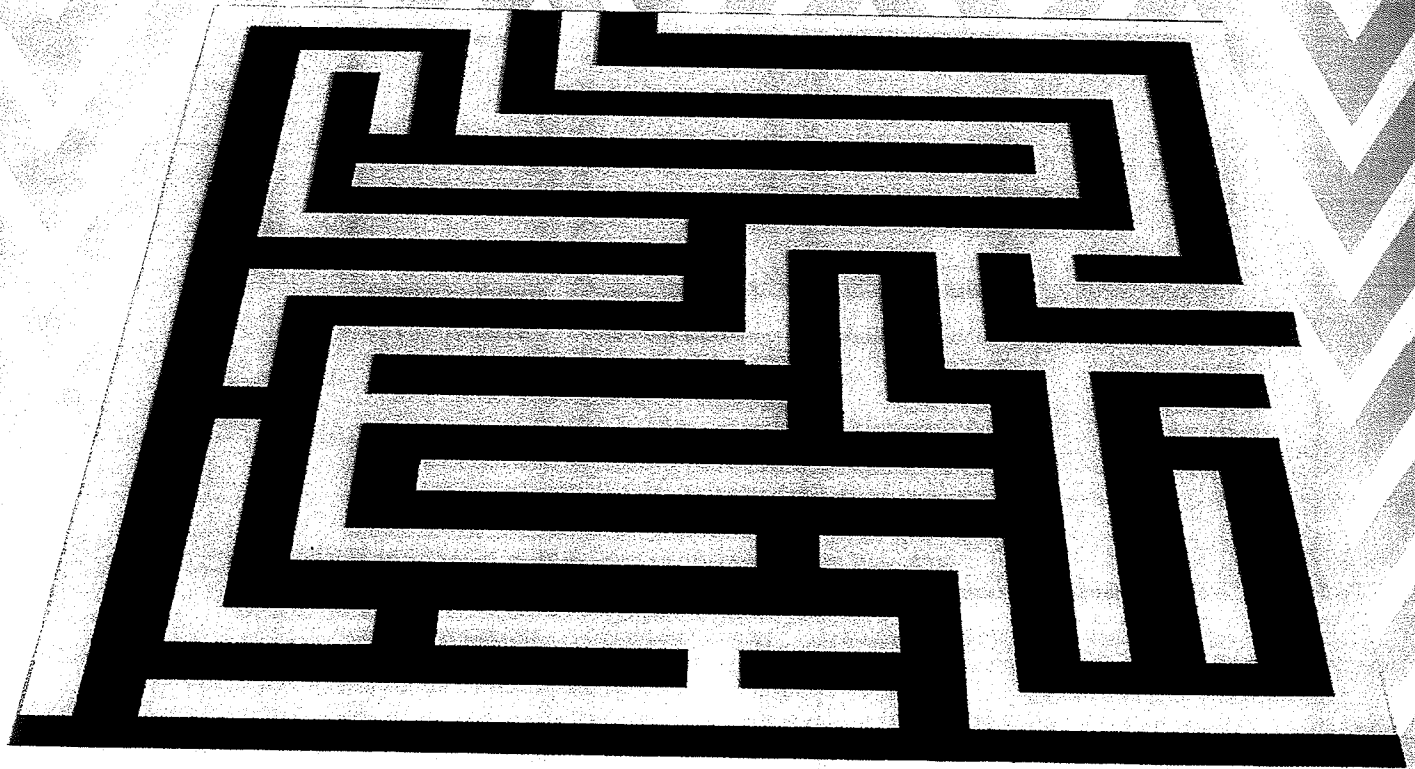
# GAME BOARD

Find the sums 37, 49, 61, 33 and 71 in this math maze.

<b>START</b>				<b>END</b>			
5	12	11	3				
8	4	15	6				
13	10	1	14				
2	7	16	9				

# MAZE

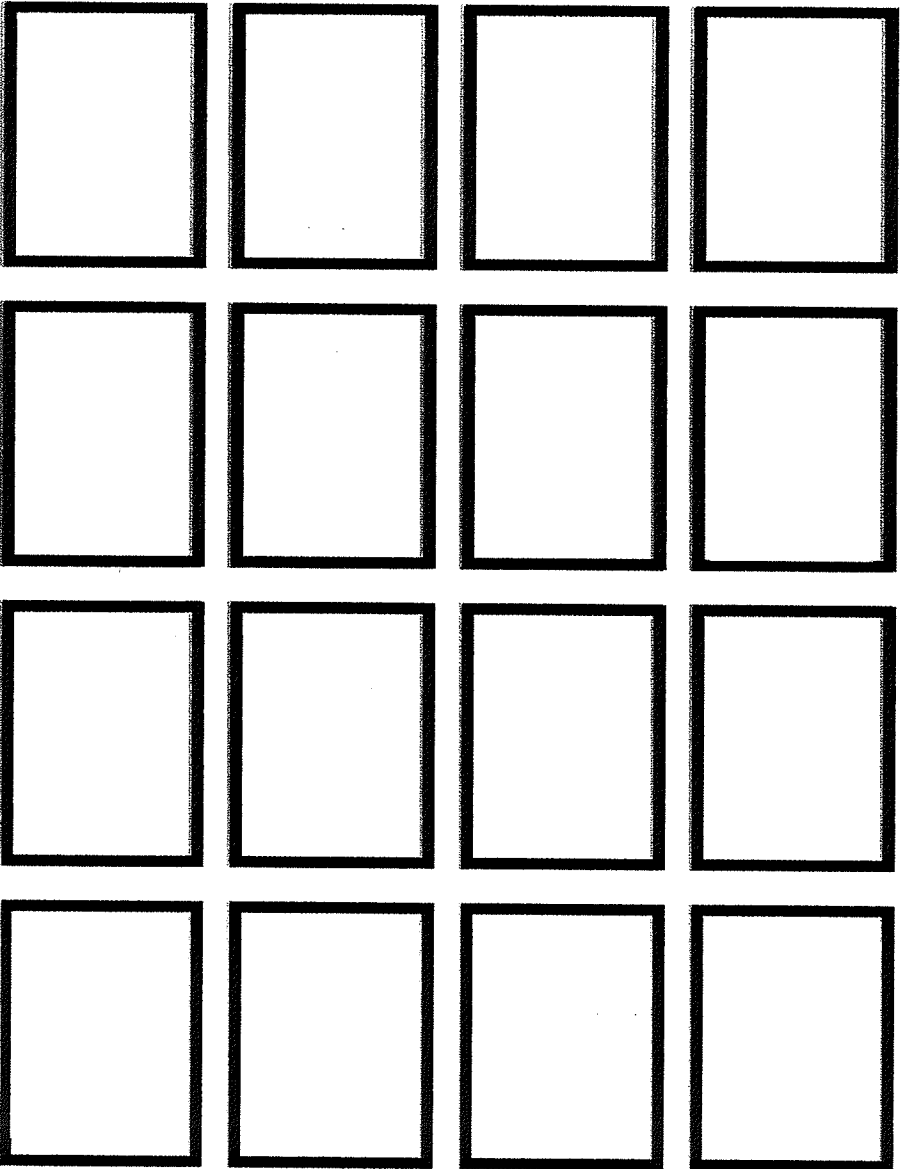
## MAZE ADDITION



# **GAME BOARD**

Create your own maze.

**START**



**END**