Box Cars and One-Eyed Jacks

ENGAGING PARENTS
BY HOSTING
A FAMILY MATH NIGHT

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Putting together a

Family Math Night

The purpose of a Family Math Night is to bring parents and students together to play a variety of games that review and strengthen math concepts. Games are a fun way to provide homework support to your parents and build success and self esteem for your students.

Getting Started:
- ✓ Set a date and time
- ✓ Send home an initial invitation
- ✓ Get an early head count
- ✓ Determine format: whole group v. centers
- ✓ Choose games   ->
- ✓ Enlist faculty members
- ✓ Gather materials
- ✓ Send out a second invitation
- ✓ Organize materials, rooms, staff
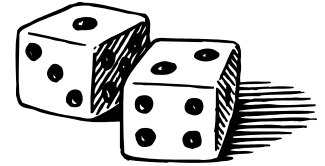
Suggested Game Concepts:
Number Recognition
Place Value
Operations
Probabilities

Notes:

Materials:
- ➢ Dice, cards, dominoes
- ➢ Chips
- ➢ Number lines
- ➢ Game boards
- ➢ Paper plates
- ➢ Paper, pencils
- ➢ Signs on entry, doors

Remember: Your PTA can be a great resource for food and funding! Invite them to participate!

Foxboro Elementary
Family Math Night

Thursday, March 31st
6:30 – 8:00

Parents, bring your children for a fun night of games that will help review and strengthen math concepts and build fluency with basic facts. Games are a fun way to provide homework support and build success and confidence in every math student. Come prepared to **play!**

To prepare for this event, we must get a 'head count'. If you can attend, please complete the section below and have your child return it to his/her teacher by this Friday, March 11th.

**Note: Students must be accompanied by an adult. The purpose of this activity is to have parent and child play math games together. A parent can easily attend with more than one child as long as their ability levels are similar.

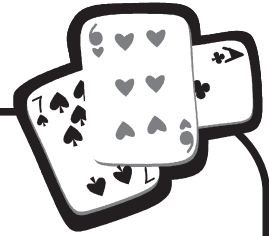++

Student's name: Grade:

_____   _____
_____   _____
_____   _____
_____   _____
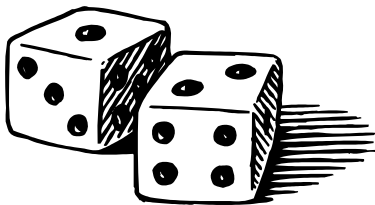
Parent's name: _____

_____

**If you plan on attending, please return this by Friday, March 11th.

Addition Face-Off

LEVEL: Grades 2 and up

SKILLS: Addition

PLAYERS: 2

EQUIPMENT: 1 deck of cards Ace – 9 (Ace = 1)

GETTING STARTED: Players divide the cards evenly between themselves. Then each player turns two cards over and adds them together. The player with the highest sum wins all the cards. In the event of a tie, players have a "face-off." Each player deals out three more cards face down, then turns over two more cards and adds them together. The player with the highest sum wins all the cards. Play continues until decks are empty, then the player with the most cards wins the game.

EXAMPLE:

Player One

2 3 $2 + 3 = 5$

4 3 $4 + 3 = 7$

Player Two

4 A $4 + 1 = 5$

4 5 $4 + 5 = 9$

Both players draw the same sum, so a face-off starts. Each player deals three face down cards, then draws again. Player Two wins with a sum of 9.

VARIATION: Draw more cards and arrange them as two or three-digit numbers for more difficult math.

A 5

3

Three cards: a two-digit number (15) added to a single-digit number (3).

Or...

5 3 4

2 3

Five cards: a three-digit number (534) added to a two-digit number (23).

Hundred   Board

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Hundred Board Tic Tac Toe

‣ Player one rolls 2 0-9 dice and builds a ten's/one's number.

‣ Covers the space on the board with a bingo chip. eg 62 and/or 26

‣ Player two takes their turn.

‣ Build Tic Tac Toe three in a row, horizontally, vertically or diagonally.

‣ One point per chip.

‣ Roll your partner's space and capture for 2 points per chip.

Hundred   Board

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Rock N' Roll

LEVEL: Grade 3 – 6

SKILLS: Fast recognition of five-digit place value

PLAYERS: 2 – 4

EQUIPMENT: 5 dice for each player

GETTING STARTED: All players roll their dice at the same time. Then they arrange their dice into the largest five-digit number they can. The first player to finish calls out "rock and roll!" and reads their number to the other players. When "rock and roll!" is called, other players must stop arranging their dice and freeze their numbers in their current order, even if they're not finished.

If the first player done is also the player with the largest number, they earn 10 points. If they aren't, they earn 5 points and the player with the highest number also earns 5 points. The first player who scores 50 points wins.

EXAMPLE: Player One rolls 3, 5, 1, 5 and 2. They arrange their dice as follows:
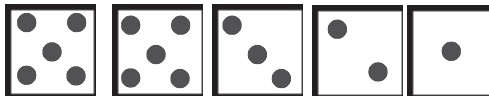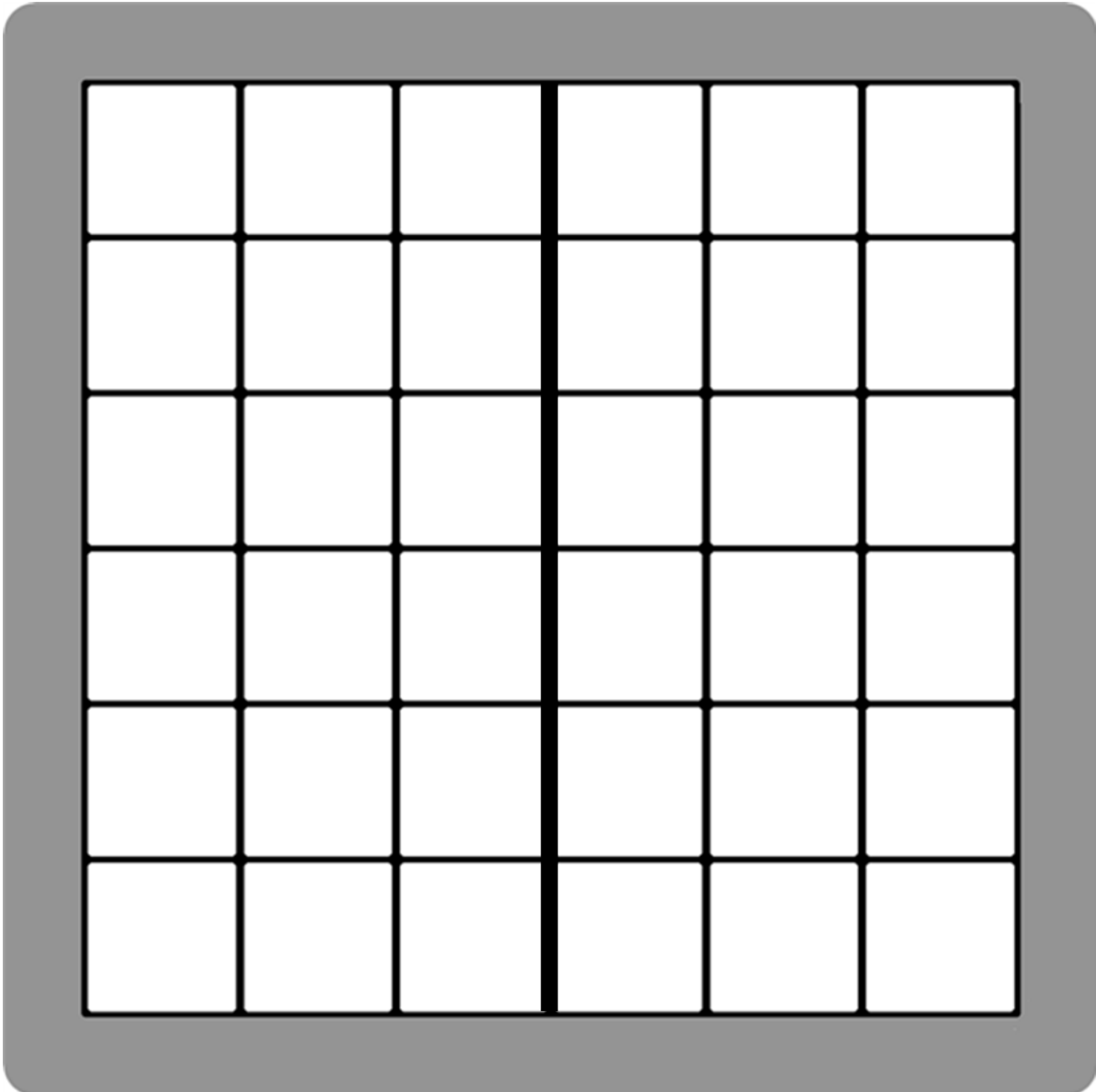

Since the other players are still building, Player One calls out "rock and roll!" Then they read "fifty-five thousand, three-hundred, twenty-one."

HORSE RACE

PLAYER ONE   **PLAYER TWO**

START   **START**

‣ Each player takes 18 dice of own color.

‣ Each player rolls two dice and adds.

‣ Player with the greatest sum places them into their side of the tray, least sum places in lid.

‣ Player with the most dice on their side of the tray at the end of the game wins.

SEVEN UP - ADD UP

LEVEL: Grade 2 and up

SKILL: addition with regrouping

SET UP: vertical or horizontal, 1 die in each slot, 1 shaker per student

PLAYERS: 2 (1 vs 1) or solitaire

**GOAL:**   to create the greatest sum with one shake

GETTING STARTED:

Each student needs their own shaker. Have students shake until $\boxed{STOP}$ is called. Players then add up all 7 dice in their shaker and calculate the sum. Greatest sum scores 1 point. Encourage students to use patterns to calculate their sums efficiently. As students work with their shakers, observe which students use:

1. names for 10
2. doubles
3. doubles +1 or +2
4. work from known facts

math thinking

math talk
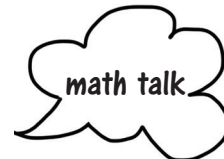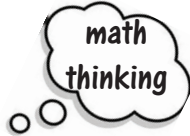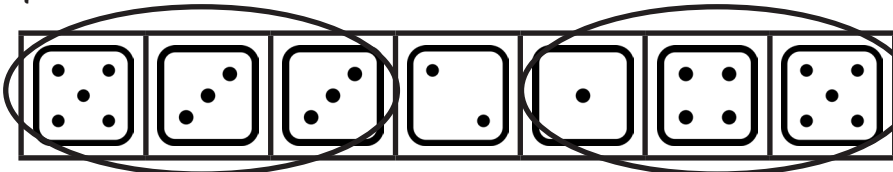
Player One

5+6= double+1   +2   5+4+1=   **WINNER!**
11   "name for 10"

Player One calculates as follows:

$5 + 3 + 3 =$ double + 1 $5 + 6 = 11$
$5 + 4 + 1 =$ name for 10 $+ 10$
                                 $+ 2$

My Sum = ⟨23⟩

Player Two
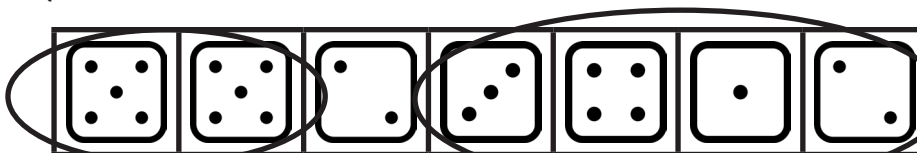
double 5 =   +2   5   +   5
10   10

Player Two calculates as follows:

$5 + 5 =$ double $= 10$
$3 + 2, 4 + 1 =$ name for 10 $+ 10$
                                 $+ 2$

My Sum = ⟨22⟩

SEVEN UP - ADD UP

FOLLOW UP ACTIVITIES:

1. Have students use the recording sheet and record shakes and how they calculated their sum.

2. Have students share their sums with the class. What was the greatest sum rolled? The least?

3. Have students calculate the greatest and least possible sums and how their greatest and least compared.

SEVEN UP - ADD UP RECORDING SHEET

Shake #   My 7 numbers ____ ____ ____ ____ ____ ____ ____   My Sum ☐

○

How I grouped my addends   Strategy I used

- _____ → _____
- _____ → _____
- _____ → _____
- _____ → _____

Shake #   My 7 numbers ____ ____ ____ ____ ____ ____ ____   My Sum ☐

○

How I grouped my addends   Strategy I used

- _____ → _____
- _____ → _____
- _____ → _____
- _____ → _____

Shake #   My 7 numbers ____ ____ ____ ____ ____ ____ ____   My Sum ☐

○

How I grouped my addends   Strategy I used

- _____ → _____
- _____ → _____
- _____ → _____
- _____ → _____

Shake #   My 7 numbers ____ ____ ____ ____ ____ ____ ____   My Sum ☐

○

How I grouped my addends   Strategy I used

- _____ → _____
- _____ → _____
- _____ → _____
- _____ → _____

KNOCK YOURSELF OUT

LEVEL: 2 – 6

SKILLS: adding, subtracting, probability, problem solving, multiplication, division for variation, creating outcomes charts, analyzing outcomes
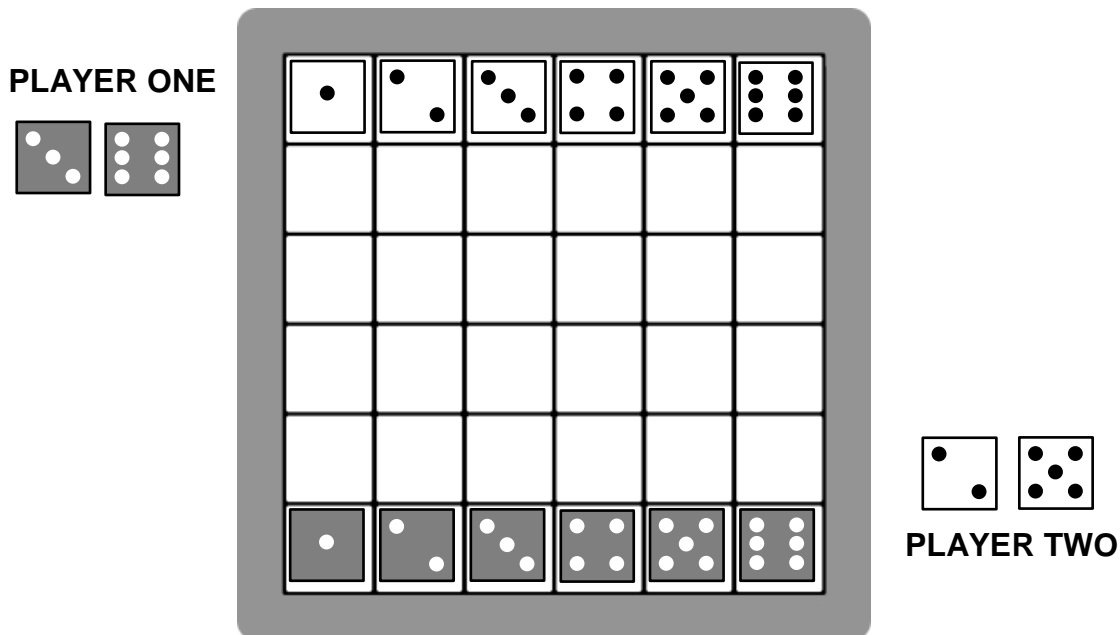
PLAYERS: 2 (1 vs 1) or 4 (2 vs 2)

EQUIPMENT: tray of dice (each player needs 6 dice of their own color plus 2 of their opponent's color, and one half of the tray for their gameboard)

GOAL: to be the first player to remove all six of their dice from their side of the tray.

GETTING STARTED:

Players set up the gameboard as follows:

The dice in the tray are arranged in a numeric sequence 1 – 6 and remain in that order for the entire game.

Once the tray is set up, play can begin. Players alternate turns and play as follows: The two extra dice are rolled on each player's turn. The dice may be either added for a sum OR subtracted for a difference. The answer must be a number from one to six. A player can choose which operation to perform and remove only one die per turn. The removed die must not be changed, i.e. if the die removed is the [three] (three), it must remain a three, and it must be placed back into the third position if required during the course of the game.

KNOCK YOURSELF OUT

If a player is unable to either add or subtract to equal any of the numbers left on their side of the tray, the player receives a STRIKE and they must CHOOSE and REPLACE any die that has been earlier removed. If there are no dice to replace, the player simply misses that turn.

ROLL WARNING: Double 6's, double 5's and double 4's are automatic strikes. The player will either miss a turn or put a die back if these rolls occur.

EXAMPLE:
Player One only
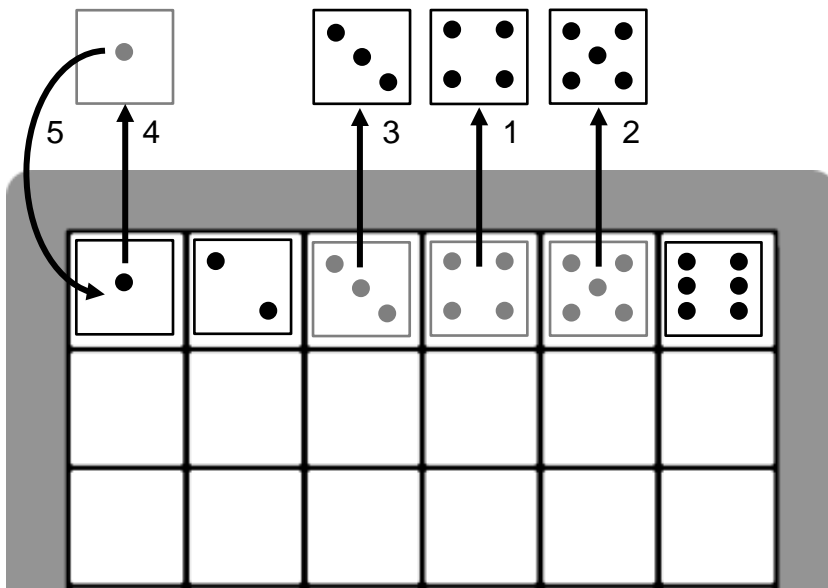
Roll 1: 6 & 2
    6 – 2, removes 4

Roll 2: 3 & 2
    3 + 2, removes 5

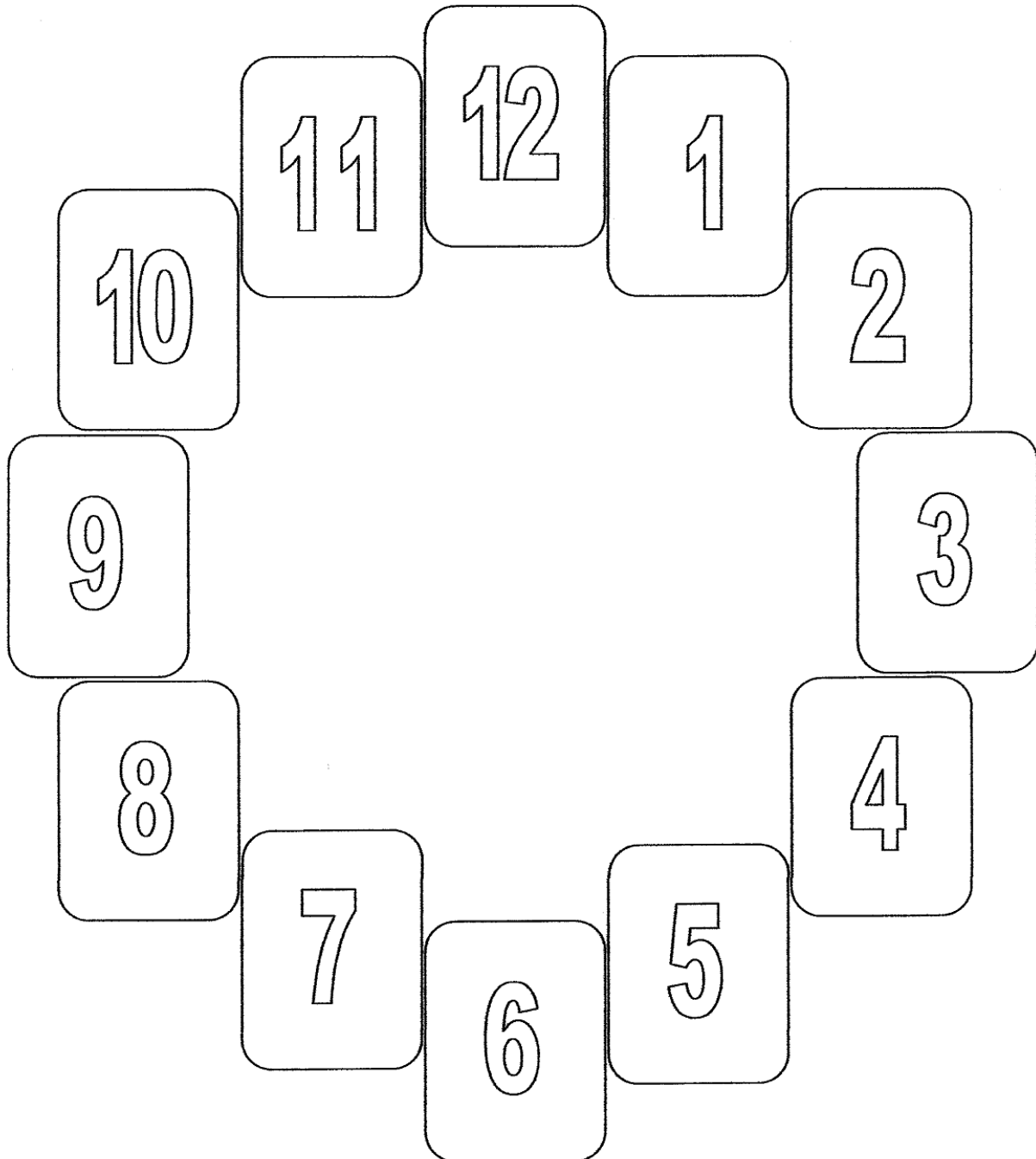Roll 3: 2 & 1
    2 + 1, removes 3

Roll 4: 6 & 5
    6 – 5, removes 1

Roll 5: 6 & 1
    6 – 5 = 1, which is already out
    6 + 1 = 7, which is not an option

    Player must now put a die back.
    Player chooses 1

Players continue to alternate turns rolling, analyzing, adding and subtracting combinations until one player has successfully removed all six of their dice at once.

WHAT TIME IS IT MR WOLF?

12 11 1
10 2
9 3
8 4
7 5 6

- Roll 2 regular dice and add them together.
- Use the result to fill in a time on their clock by crossing off the number on the clock, or, if playing with cards, turn over the card with the corresponding number.
- Players alternate turns until only 1 o'clock remains.