

# FAMILY MATH NIGHT

Games for all families  
grades PreK–8

## **PARENTS**

Discover new ways to help your kids

## **STUDENTS**

Play and have fun with your friends

## **FAMILIES**

Enjoy math a whole new way!

Looking for simple and effective ways to help your kids outside the classroom? Learn, play, and enjoy new games you can do with your kids that will improve their math skills. Fluency starts at home!



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# 52 CARD PICK UP



Let players throw the whole set around. Obviously, parameters and guidelines are given, but let them go for it. Through the cards up, make it rain, Let them do what every little kid wants to do with a stack of cards. And then, scoop them all up and do it again. Actually, it is a nice little gross motor skills intermission during card play with jumping and dancing here.



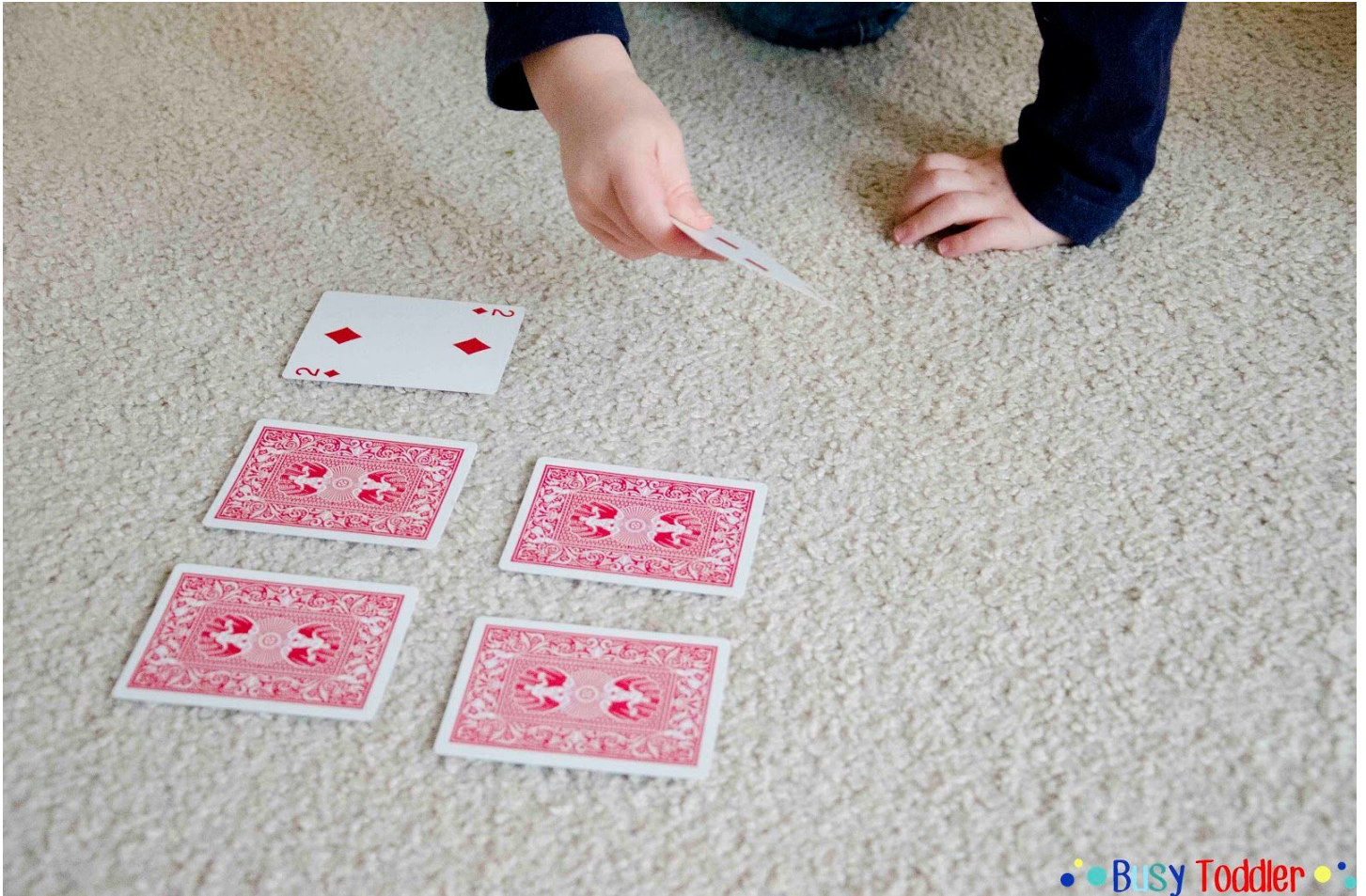
# GUESS AND SORT



Work together to turn every card upside down. Then, start a pile of black and a pile of red at opposite ends of the massive upside down pile of cards. Touch a card, guess red or black, flip to reveal and insert toddler giggles here. It doesn't matter if the guess is correct, preschoolers love every minute of the anticipation and flipping the cards over. A perfect way to end card play.



# MAKE A MATCH



Lay 12 cards face down. Players flip the cards over to find matching suits. Do this in the same vein as Memory, but toddlers' memory is mostly just flipping over random cards until they find two diamonds, two hearts, two spades etc.



# ORDER MATTERS



Kids can use cards to practice counting and ordering numbers correctly. Younger kids can start with just a few to order at a time and older kids can time themselves to see how fast they can be a larger group into numerical order.



# SIMPLE SORTING



Just seeing the cards is an “oooooh, aaaaah” moment. Start by inspecting them and showing the different suits and colors.

Pulled out 3 cards from each suit (12 cards total) and lay them face up. Put a red card on the left and a black one on the right and simply asked player to sort the cards by color. Simple enough, a great “ice breaker” activity for your first game with the playing cards. Sorting is such an important math skill so there is learning tons here classifying by color.

# OLD MAID



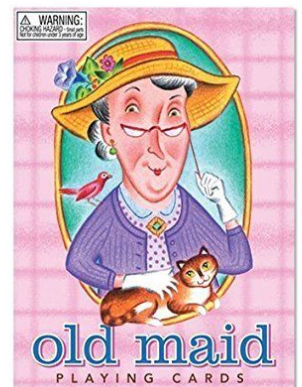
**Object:** To discard all of your cards and not get left holding the Old Maid card.

**Set Up:** Shuffle the cards and deal all of the cards face down. Some players may have more cards than others. That's OK. Players sort their cards and place any number or face card pairs face down in front of them. If a player has three cards of the same number or face card, he keeps one card in his hand and places the pair face down on the table. If a player has four matching cards (2 pairs) he can put all four down on the table.

**How to Play:** Player to the left of the dealer goes first. He makes a fan out of his cards and holds them, face down, to the player on his left. That player chooses one card from the fan without seeing it. If the card makes a pair with a card he has in his hand, he can put the new pair face down on the table. If not, he keeps the card. Now he fans out his cards for the player sitting to his left. Play continues in a circle, with players choosing cards and putting down pairs. Once a player has played all of his cards, he is safe.

**Game End:** The game is over when everyone has played all of their cards. The player left holding the Old Maid (queen of spades) loses.

**Strategy Hint:** Try to keep a straight face if you get the Old Maid. Don't let the other players know you have it!





# GO FISH



**Set Up:** The first thing you do is deal cards to the players. For 2 to 3 players you deal each player 7 cards. If there are more than three players, deal 5 cards each. The rest of the deck is then spread out in the middle of the players face down. This can be called the pool of cards.

**Taking a Turn:** Each player gets a turn in clockwise order (to the player's left). During a turn the player asks another player if they have a particular rank of card. For example, the player may ask Kathy if she has a nine. If Kathy has a nine, then she must give all the nines to the player. If Kathy doesn't have a nine, then she says "Go Fish".

When you "Go Fish" you take any card from the pool.

If the player gets the card they asked for, either from the pool or from Kathy, then the player gets another turn.

If the player completes a four of a kind, then they put the cards face up in front of them.

**Winning the Game:** "Go Fish" is over when one player runs out of cards or there are no more cards in the pool. The winner is then determined by who has the most four of a kind groups of cards in front of them.



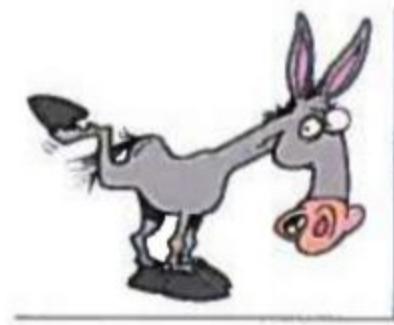
# 20 AND OUT

**Players:**

2 players

**Materials:**

A-9 cards

**How to Play:**

Players divide the cards evenly between themselves, keeping them face down. Player 1 turns over his first card. Player 2 turns over her first card, then says a number sentence that adds the two cards together. Ace equals 1. For example, if Player 1 turns over a 5 and Player 2 turns over an Ace, Player 2 says, "5 plus 1 equals 6." Player 1 turns over another card and says a number sentence that adds the new card to the total. Using the same example, if Player 1 turns over a 3, he says, "6 plus 3 equals 9." Play continues until the sum of 20 has been reached. If the sum goes over 20, the player subtracts the next card instead of adding it. For example, if the sum is 24 and a 6 comes up next, the player says, "24 minus 6 equals 18."

The player who turns over the card that results in the exact sum of 20 wins the round. The player who wins the most rounds by the time the game ends is the winner.

**Objective:**

Be the first player to reach the each total of 20 without going over.

**Variations:**

Choose a target number that is greater than 20.

**\*Adapted from. Math Play.**2015 Crystal Springs Books, 1.OA 5: 2.OA.2; MP6



# I SPY

## How to Play:

ARRANGE CARDS IN ROWS.

PLAYER 1 SECRETLY CHOOSES TWO NEIGHBORING CARDS AND ADDS THEM TOGETHER. HE OR SHE THEN SAYS, "I SPY WITH MY LITTLE EYE, TWO CARDS WITH THE SUM OF \_\_\_\_."



PLAYER 2 FINDS AND PICKS UP THE NEIGHBORING PAIR OR PAIRS WITH THE CORRECT SUM.

IF PLAYER 2 MISSES ANY OTHER PAIRS THAT MAKE THE SUM, PLAYER 1 CAN CLAIM THEM.

THE PLAYER WITH THE MOST CARDS WINS!

# ADDITION WAR

## How to Play:

DEAL ALL OF THE CARDS OUT INTO TWO STACKS.

ONE PLAYER SAYS, "WAR" AND BOTH PLAYERS TURN OVER THEIR TOP TWO CARDS. BOTH PLAYERS ADD THEIR CARDS AND STATE THEIR ADDITION SENTENCE: "2 PLUS 4 EQUALS 6."

THE PLAYER WITH THE HIGHER SUM GETS TO KEEP BOTH SETS OF CARDS.

IF THERE IS A TIE, TWO MORE CARDS WILL BE FLIPPED AND ADDED.

THE PLAYER WITH THE MOST CARDS WINS!





# QUICK DRAW

## How to Play:

DEAL ALL OF THE CARDS OUT INTO TWO STACKS.

ONE PLAYER SAYS, "DRAW" AND BOTH PLAYERS TURN OVER THEIR TOP CARD.



THE FIRST PLAYER TO SAY A CORRECT ADDITION SENTENCE AND SUM GETS TO KEEP THE CARDS.

THE WINNER IS THE PLAYER WHO HAS THE MOST CARDS WHEN THE BOTTOM OF THE STACK IS REACHED.

# TENS GO FISH!

## How to Play:

REMOVE THE JACK, QUEEN, AND KING.

EACH PLAYER GETS 5 CARDS.



PLAYERS MATCH UP CARDS TO MAKE SUMS OF TEN. PLAYERS TAKE TURNS ASKING EACH OTHER FOR THE MISSING ADDEND NEEDED TO MAKE TEN.

IF PLAYER 2 DOES NOT HAVE THE CARD, PLAYER 1 WILL “GO FISH” IN THE PILE OF CARDS IN THE MIDDLE.

WHEN A PLAYER GETS A MATCH, HE OR SHE DRAWS ANOTHER CARD.

IF A PLAYER RUNS OUT OF CARDS, HE OR SHE DRAWS FROM THE PILE.

THE PLAYER WITH THE MOST MATCHES WINS.



# TENS MEMORY MATCH

## How to Play:

REMOVE THE 10, JACK, QUEEN, AND KING.

PLACE CARDS IN ROWS. PLAYERS TAKE TURNS FLIPPING TWO CARDS TO MAKE A SUM OF TEN.

IF THE SUM IS TEN, THE PLAYER GETS TO KEEP THE CARDS. IF NOT, THE CARDS ARE FLIPPED FACE DOWN AND THE SECOND PLAYER GETS A CHANCE TO FIND A MATCH THAT MAKES TEN.

THE WINNER IS THE PLAYER WITH THE MOST CARDS AFTER ALL CARDS HAVE BEEN MATCHED.



# GIVE ME 10

**PLAYERS:** 2

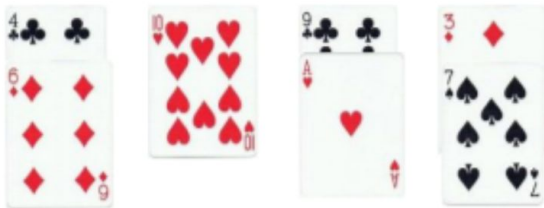
**MATERIALS:** DECK OF CARDS, FACE CARDS REMOVED, ACE WORTH ONE.

**HOW TO PLAY:**

DEAL 10 CARDS FACE UP.



PLAYERS TAKE TURNS FINDING AND REMOVING COMBINATIONS OF CARDS THAT ADD UP TO 10.



DEAL OUT CARDS SO THERE ARE ALWAYS 10 CARDS FACE UP.

TO MAKE IT CHALLENGING, FIND THREE CARDS THAT ADD UP TO A TARGET NUMBER (3 NUMBERS THAT ADD UP TO 20).

# HIT THE TARGET

**PLAYERS:** 2

**MATERIALS:** DECK OF CARDS, FACE CARDS WORTH 10, ACE WORTH ONE OR 11.

## HOW TO PLAY:

LAY OUT FIVE CARDS FACE UP. THEN, CHOOSE ONE ADDITIONAL CARD TO BE THE TARGET NUMBER. YOU MAY ADD, SUBTRACT, MULTIPLY, OR DIVIDE TO HIT THE TARGET NUMBER. TRY TO USE ALL FIVE CARDS, BUT YOU MUST USE AT LEAST TWO CARDS.

WINNER TAKES THE CARDS IN THE EQUATION, PLUS THE TARGET NUMBER.



TARGET NUMBER IS



A PLAYER COULD CHOOSE:  $5 - 2$  OR  $8 - 5$

OR  $10 - 5 - 2$  OR  $5 \times 2 - 7$

LOOK FOR MORE WAYS!



# KAKOOMA

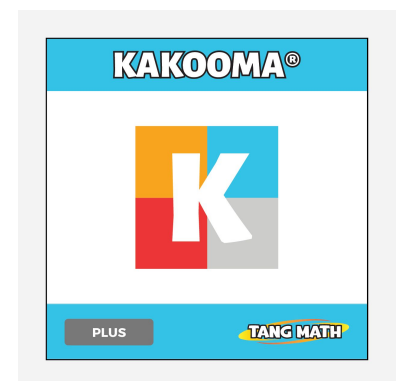


## HOW TO PLAY:

ON EACH CARD, FIND THE NUMBER THAT'S THE SUM (BLUE CARDS) OR PRODUCT (GOLD CARDS) OF TWO OTHER NUMBERS ON THAT CARD.

BLUE CARDS ADDITION			GOLD CARDS MULTIPLICATION		
4	10	19	12	5	30
13	7	5	3	9	7
16	8	25	2	16	4

WHEN A PLAYER SEES THE ANSWER, HE/SHE SAYS "KAKOOMA!", AND POINTS OUT THE ANSWER. IF CORRECT, THEY KEEP THE CARD. THE PLAYER WHO COLLECTS THE MOST CARDS WINS!



# NUMSKILL



## HOW TO PLAY:

DEAL OUT 9 CARDS FACE UP ON THE TABLE IN 3X3 ARRAY. THE GOAL IS TO FIND A SET.

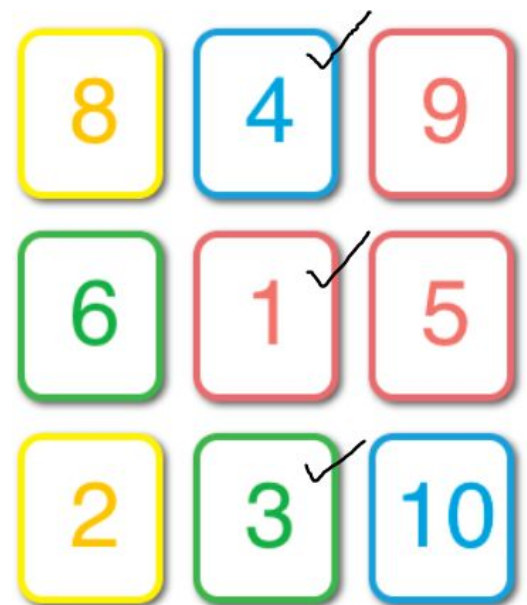
A SET CONSISTS OF 3 CARDS, 2 OF WHICH ADD UP TO THE 3RD, ALL 3 DIFFERENT COLORS.

WHEN A PLAYER SEES A SET, HE/SHE SAYS "NUMSKILL!" AND POINTS OUT THE CARDS.

IF CORRECT, THAT PLAYER GETS TO TAKE THOSE CARDS, AND 3 NEW CARDS ARE ADDED.

IF NO SET IS FOUND, ADD AN EXTRA CARD (CONTINUE TO DO SO)  
UNTIL A SET IS FOUND.

GAME ENDS WHEN ALL CARDS HAVE BEEN DEALT. PLAYER WITH THE MOST CARDS WINS!



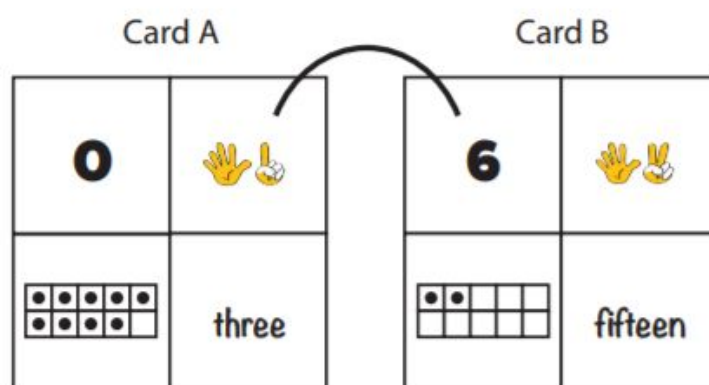
# NUMTANGA



## HOW TO PLAY:

CHOOSE ANY TWO CARDS AT RANDOM. CARD A & CARD B.

BETWEEN CARD A & B, THERE IS ONLY 1 EQUIVALENT VALUE.



**THE BOARD:** PLAYER 1 FLIPS TWO CARDS AND LOOKS FOR THE MATCH. WHEN THE MATCH IS FOUND, HE/SHE GETS TO ROLL AND MOVE PIECE. PLAYERS TAKE TURNS REPEATING THIS IN ORDER.

IF A PLAYER LANDS ON “RACE”, THEY FLIP TWO MORE CARDS, AND THE PLAYER WHO SEES THE MATCH FIRST GETS TO MOVE 1 SPACE. THE PLAYER WHO REACHES THE END OF THE BOARD FIRST WINS!





# SHUT THE BOX



**SET UP WITH PLAYING CARDS:** TURN FACE UP CARDS 1 THROUGH 9, OF THE SAME SUIT, IN A HORIZONTAL ROW FOR EACH PLAYER.

**HOW TO PLAY:** PLAYER 1 ROLLS THE DICE AND CALCULATES THE SUM OF THE TWO NUMBERS. PLAYER 1 THEN FLIPS OVER CARDS THAT HAVE THE SAME SUM AS WHAT WAS CALCULATED FROM THE DICE ROLL. IF THE NUMBERS 7, 8 AND 9 ARE ALL COVERED, PLAYER 1 MAY *CHOOSE* TO ROLL ONE OR TWO DICE. IF ANY OF THESE NUMBERS ARE STILL FACE UP, THE PLAYER MUST USE BOTH DICE. PLAYER 1 CONTINUES ROLLING DICE, CALCULATING THE SUM AND FLIPPING OVER CARDS UNTIL THEY CAN NO LONGER CONTINUE.

EXAMPLE:	DICE	TOTAL CARDS FLIPPED
	2	NO. 2
	3 EITHER	NO.3 OR NO.1 AND NO.2
	4 EITHER	NO.4 OR NO.1 AND NO.3
	5 EITHER	NO.5 OR NOS.1 AND 4, OR NOS.2 AND 3
	6 EITHER	NO.6 OR NOS.1 AND 5, OR NOS.2 AND 4, OR NOS. 1, 2, AND 3

**VARIATION FOR YOUNGER PLAYERS:** USE CARDS 1 THROUGH 6. INSTEAD OF CALCULATING THE SUM OF THE DICE, PLAYERS FLIP OVER THE CARD THAT CORRESPONDS TO THE NUMBER ON ONE OR BOTH DICE.

**SCORING:** IF ALL NUMBERS ARE FLIPPED OVER, THE PLAYER SAYS “SHUT THE BOX”. IF NOT ALL NUMBERS ARE FLIPPED OVER, PLAYER 1 DETERMINES THE SUM OF THE NUMBERS THAT ARE FACE UP AND THAT IS THEIR SCORE. IF “SHUT THE BOX” IS ACHIEVED, A PLAYER RECORDS A SCORE OF “0”. PLAYER 2 TURNS FACE UP THE CARDS 1 THROUGH 9, OF THE SAME SUIT, IN A HORIZONTAL ROW, AND FOLLOWS THE SAME RULES AS PLAYER 1.

**WINNER:** THE PLAYER WITH THE LOWEST SCORE (REMAINING SUM) WINS.



# EXPONENT WAR



**PLAYERS:** 2-4 PLAYERS

**MATERIALS:** 2 DICE

**HOW TO PLAY:**

ROLE A PAIR OF DICE. ONE WILL BE THE EXPONENT AND ONE WILL BE THE BASE NUMBER. CHOOSE CAREFULLY WHICH ONE YOU WANT AS THE EXPONENT BECAUSE YOU WANT TO PRODUCE THE GREATEST RESULT.

FOR EXAMPLE, IF YOU ROLL A 3 AND A 2 YOU COULD MAKE  $2^3$  OR  $3^2$ . YOU WOULD WANT TO SELECT  $3^2$  BECAUSE  $3^2$  ( $3 \times 3$ )  $>$   $2^3$  ( $2 \times 2 \times 2$ ).

BE CAREFUL: THERE IS A CATCH TO THE GAME. IF YOU ROLL A 6 ON YOUR TURN, YOUR SCORE IS ZERO FOR THE ROUND.

6.EE.2

# HIT THE TARGET (MIDDLE GRADE VERSION)

**PLAYERS:** GROUPS OF 2 TO 5 PLAYERS

**MATERIALS:** DECK OF CARDS, ACE WORTH 1 OR 11, JACK WORTH 12, QUEEN WORTH 13, KING WORTH 14, SCRATCH PAPER.

**SKILL:** MULTIPLICATION, ADDITION, SUBTRACTION, DIVISION, ORDER OF OPERATIONS, AND MATHEMATICAL REASONING.

## HOW TO PLAY:

Each group of 2 - 5 students selects a target number from 1-30. One of the players will turn five cards from the deck face up and the object is for students to make a number sentence using all five cards with any operations to reach the target number.

EX: Suppose the target number is 20 and the cards in play are 5, 5, 6, 2, and Ace (worth 1).

One winning combination is:  $5 \times 2 + 5 + 6 - 1 = 20$ . Another is  $(6 \times 5) - (2 \times 5 \times 1)$ . Also,  $(6 \div 2) \times 5 + (5 \times 1)$  works, as do many more.

The first player to find a winning combination keeps the cards and chooses the next target number. If no combination is found in about a minute, flip over another card and try to make a combination using six cards.

To keep the game fair for players of different abilities, introduce the rule that if a player hasn't made a combination in three rounds, he or she may make combinations using four of the five cards until they make a winning combination; other players must use five.



# INTEGER CARD GAME

The Integer Game is to help students develop a conceptual understanding of integer operations.



**Materials:** Deck of cards, Ace worth 1 or 11, Jack worth 12, Queen worth 13, King worth 14 (Red cards are negative and black cards are positive.)

**How to Play:** The Integer Game is designed for 2 to 4 players. Students play the game with a partner or with a group of students. Each player begins the game with a score of zero. The object of the game is to return

to a score of zero by picking up and discarding integer cards. The number of cards dealt to each player can be adjusted based on students' familiarity with an operation and to differentiate for varying student ability levels.

## Basic Rules:

A student serves as the dealer (as well as a player) and provides each player with four cards. The dealer turns one more card face up on the playing surface, starting a discard pile. The remaining cards become a draw pile.

The player to the dealer's left begins play. On his turn, a player may select the top card from either the draw pile or the discard pile. The player must keep this card and discard another card from his hand to the discard pile.

Keeping in mind that red cards have a negative value and black cards have a positive value, a player's goal is to have his hand's total card value stay as close to zero as possible. So for each turn, a player must determine how the card drawn affects his hand's total card value, by counting up or down accordingly. Also, a player must decide which card to discard so as to keep the total value of his hand as close to zero as possible.

Play continues with the next player, in the same manner, until all players have picked up and discarded a card four times. The player(s) with a score of zero (or the closest to zero, as in Lesson 2) wins the round.

# THE CHOSEN ONE



**PLAYERS:** UP TO 4 PLAYERS

**MATERIALS:** DECK OF CARDS, ACE WORTH 11, JACK WORTH 12, QUEEN WORTH 13, KING WORTH 14, SCRATCH PAPER.

**SKILL:** MADDING POSITIVE AND NEGATIVE INTEGERS

## HOW TO PLAY:

THE GOAL OF THE GAME IS TO REACH A TOTAL OF ONE BY ADDING AND SUBTRACTING.

DEAL 2 CARDS TO EACH PLAYER.

PLAYER ONE PLAYS A CARD, STATES ITS VALUE AND IMMEDIATELY PICKS UP ANOTHER (\*PLAYERS MUST HOLD 2 CARDS AT ALL TIMES). THE VALUE CAN BE POSITIVE OR NEGATIVE SUCH AS +5 OR -5 REGARDLESS OF THE COLOR/SUIT.

PLAYER TWO PLAYS AND ADDS OR SUBTRACTS CARD 1. PLAY CONTINUES UNTIL A POSITIVE 1 IS MADE.

THE PLAYER WHO MAKES POSITIVE 1 WINS THE CARDS. PLAY CONTINUES UNTIL ALL CARDS ARE PLAYED.

THE PLAYER WITH THE MOST CARDS WINS.

**THANK YOU TO ALL WHO CAME TO THIS YEAR'S  
FAMILY MATH NIGHT!**



Open to all families grades PreK-8

**FAMILY  
MATH  
NIGHT**

**THURSDAY, OCTOBER 4TH | 6-7PM  
JEFFERSON NORTH GYM**



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