

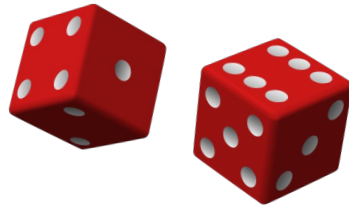


EASY MATH GAMES TO BUILD NUMBER SENSE

D99 Parent University - March 23, 2019

WHY USE GAMES TO LEARN?

- Engaging
- Purposeful & repeated practice
- Strategic thinking
- Independent
- Choice & variety



EARLY LEARNING

- COUNTING TO 10
- SORTING & DESCRIBING
- ADDITION & SUBTRACTION

SORT IT



Decide how to sort the cards (color, suit, or numbers).

Deal out all cards.

Take turns drawing cards from your pile and placing them into the appropriate group.

COUNTING TO 10

Lay out cards Ace through 10 in order.

Have your child count out the number of buttons to match the number on each card

Variations:

- Easier - place the buttons directly on top of the symbol
- More challenging - Mix up the order of numbers



BASIC NUMBER BATTLE (WAR)



Use cards Ace through 10.

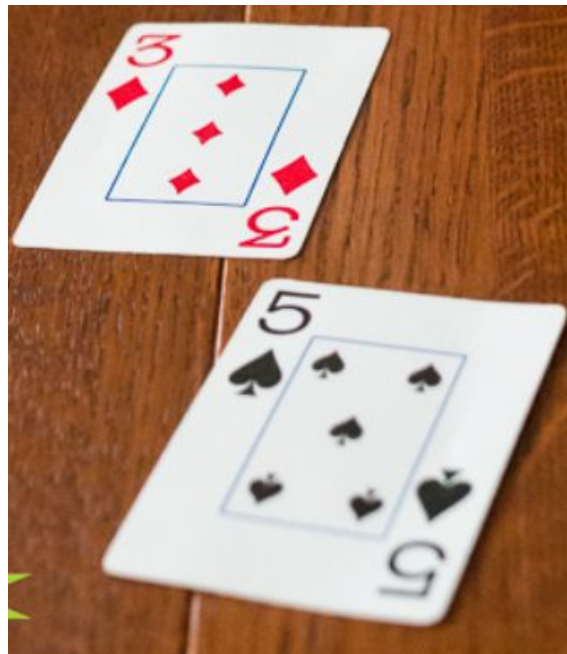
Deal out all the cards evenly among players.

Each player turns over their top card at the same time. The card with the greater value wins the round and that player takes all the cards played.

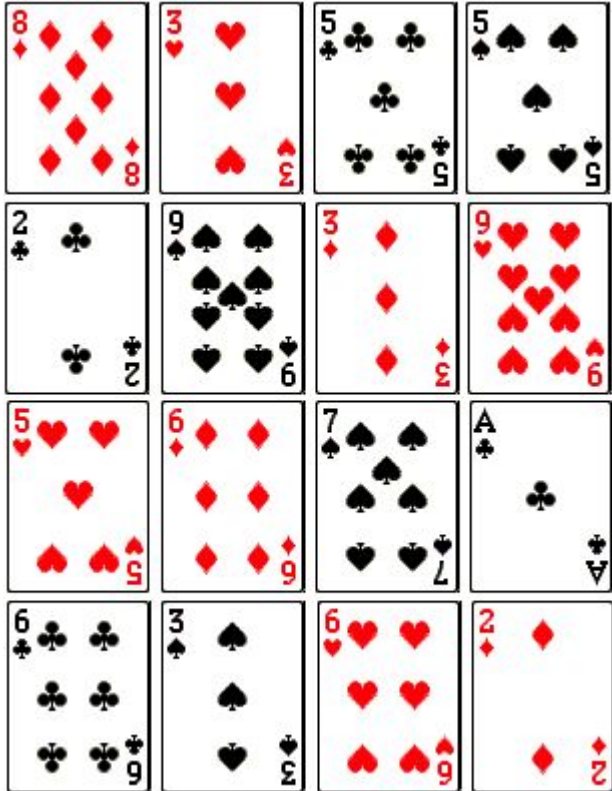
If the values are the same, flip over the next cards and compare their values to determine the winner of the round.

The person who acquires all the cards wins the game.

Variation: Play with dice instead of cards and tally how many rounds each player wins.



MAKE 10



Using cards 1 (Ace) through 9, lay out an array of cards.

Take turns finding combinations of cards whose sum is 10.

The player with the most combinations wins.

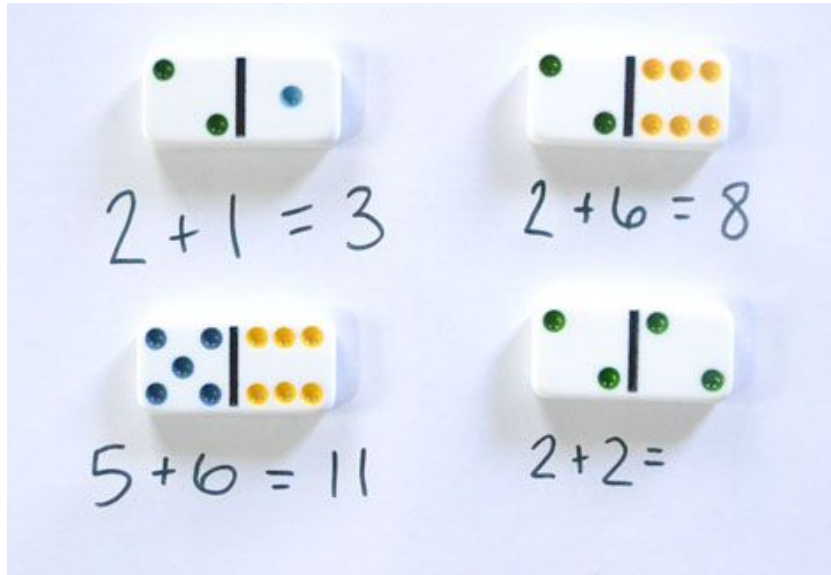
Variations:

- The player with the most cards wins.
- Choose a different target sum.

DOMINO ADDITION



Choose one domino and find the sum of the two sides.



DICE ADDITION



Roll two dice and find the sum.



$$4 + 2 = 6$$

TARGET NUMBER



Designate a target number between 1 and 10.

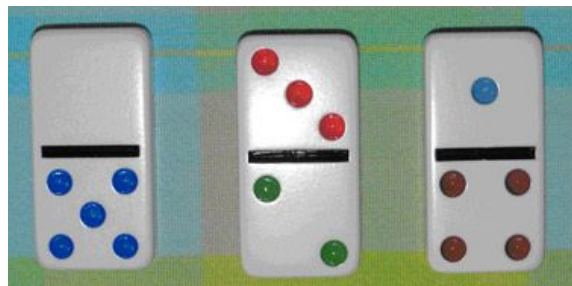
Find dominoes that have a total number of dots equal to the target number.

Write equations to represent adding the dots. Be sure to turn the dominoes around to write all possible equations.

Target Number 5



$$4+1=5 \quad 2+3=5 \quad 5+0=5$$



$$1+4=5 \quad 3+2=5 \quad 0+5=5$$

FLIP AND ROLL



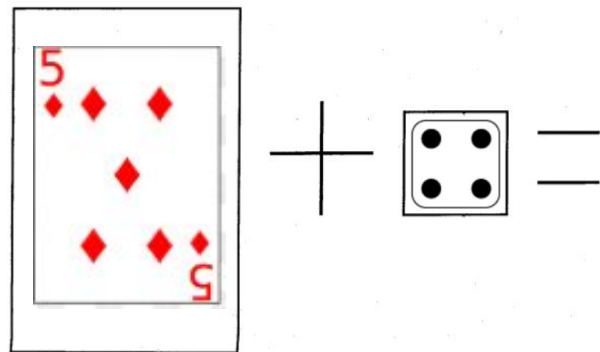
Use cards 1 (Ace) through 10 and one die.

Flip over one card. Roll the die. Add the two values to find the sum.

Write an equation to represent the problem.

Variation:

Use cards 6 through 10 and one die. Create subtraction equations and find the difference.




$$5 + 4 = 9$$

PRIMARY GRADES

- COUNTING TO 100
- ADDITION & SUBTRACTION

HUNDRED CHART COVER UP

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		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

Cover a number on the hundred chart with a coin or button.

Ask, “What number is covered?
How do you know?”

4-IN-A-ROW ON THE HUNDRED CHART



Using different colors, players take turns placing numbers in their correct spot on the hundred chart until it is completely full.

Your goal is to make more 4-in-a-rows (horizontal, vertical, or diagonal) than your partner.

Variations:

- Easier - Have a completed hundred chart available for reference
- More challenging - use a range of 100 numbers beyond just 1-100 (i.e. try 230 to 330)

PLACE VALUE NUMBER BATTLE



Use cards 1 (Ace) through 9.

Deal out all the cards evenly among players.

Decide whether to play the game building numbers in the tens, hundreds, or thousands place.

To begin, each player turns over enough cards to build a number to the designated place value. Use the cards to build a number with the greatest possible value. The player who has the greatest value wins the round. That player takes all the cards from the round as theirs.

If the values are the same, flip over another set of cards and compare their values to determine the winner of the round.

Continue with rounds in this way until one person has all of the cards and wins the game.



ODD-EVEN RACE



Use cards 1 (Ace) through 10.

Place one odd numbered card and one even numbered card in the center of the table. Deal out the rest of the deck.

Players race to get rid of all of their cards by placing their odd number cards on the odd stack and the even number cards on the even stack.

The first player to correctly get rid of all of their cards wins.



Player 1



Evens



Odds



Player 2

ONE MORE, ONE FEWER RACE (SPEED)

Use cards 1 (Ace) through 10.

Between 2 players, place two piles of five cards face down with 2 single cards placed face down between the piles.

Deal out the rest of the cards between the players. Pick up 5 cards to hold and view in your hand.

To begin, flip over both cards single cards. Either player can play a card from his hand onto either of the two playing piles by placing a card that is one more or one fewer than the card that is on the top of the pile.

Each time a card is played, you can pick up a new card from your extras so that you always have five cards in your hand.

If neither player can play a card on either pile, refresh each pile with a new card from the 5-card piles on either side.

The first player to be out of cards wins!



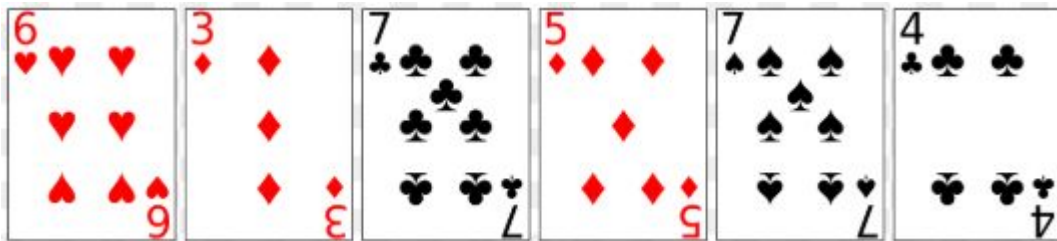
CLOSE TO 20



Use cards 1 (Ace) through 10.

Deal out six cards face up.

Use any combination of two or three cards to make a sum as close to 20 as possible.



+ +

ADDITION NUMBER BATTLE



Use cards 1 (Ace) through 10.

Deal out all the cards evenly among players.

To begin, each player turns over two cards. Find the sum. The player who has the greatest sum wins the round. That player takes all the cards from the round as theirs.

If the sums are the same, flip over another set of cards and compare their sums to determine the winner of the round.

Continue with rounds in this way until one person has all of the cards and wins the game.

Variation: Use dominoes instead of cards. Each player flips a domino, adds the dots from the two sides of the domino, and the player with the greatest sum wins the round and takes the dominoes.



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SUBTRACTION NUMBER BATTLE



Use cards 1 (Ace) through 10.

Deal out all the cards evenly among players.

To begin, each player turns over two cards. Find the difference between the larger and smaller value. The player who has the smallest difference wins the round. That player takes all the cards from the round as theirs.

If the differences are the same, flip over another set of cards and compare their differences to determine the winner of the round.

Continue with rounds in this way until one person has all of the cards and wins the game.

7 - 2 = 5

9 - 5 = 4

INTERMEDIATE & MIDDLE GRADES

- ADDITION & SUBTRACTION
- MULTIPLICATION & DIVISION
 - FRACTIONS

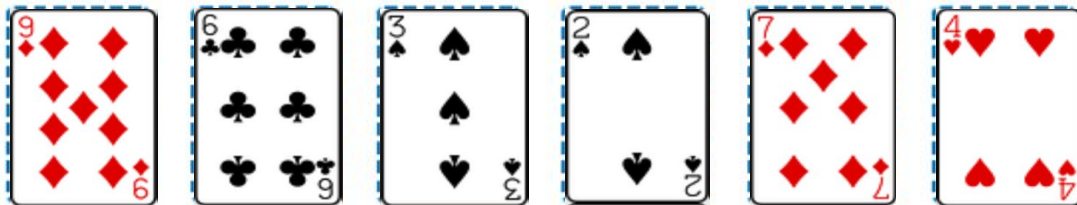
CLOSE TO 100



Use cards 1 (Ace) through 10.

Deal out six cards face up.

Use any four cards to make two 2-digit numbers with a sum as close to 100 as possible.



+

MULTIPLICATION NUMBER BATTLE



Use cards 1 (Ace) through 10.

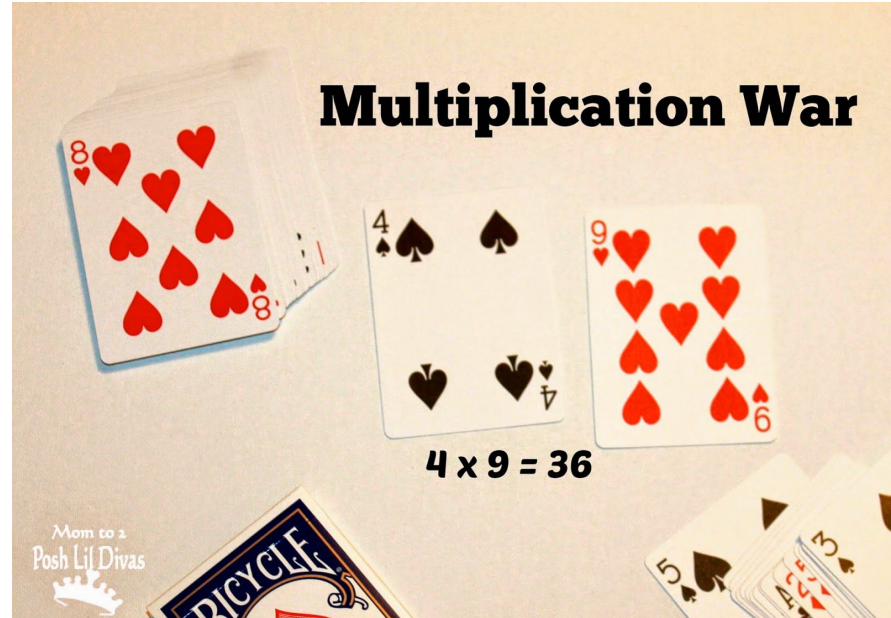
Deal out all the cards evenly among players.

To begin, each player turns over two cards. Find the product. The player who has the greatest product wins the round. That player takes all the cards from the round as theirs.

If the products are the same, flip over another set of cards and compare their products to determine the winner of the round.

Continue with rounds in this way until one person has all of the cards and wins the game.

Variation: Use dominoes instead of cards. Multiply the number of dots on one side of the domino by the number of dots on the other side. The player with the greatest product wins the round and takes



FRACTION NUMBER BATTLE



Use cards 1 (Ace) through 10 and two pencils.

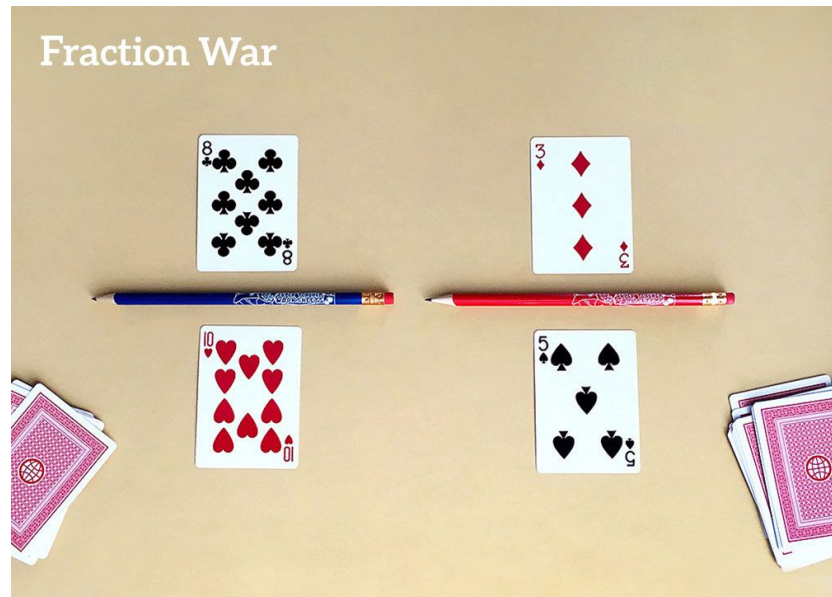
Deal out all the cards evenly among players.

To begin, each player turns over two cards creating the numerator and denominator of a fraction. The player who has the greatest fraction wins the round. That player takes all the cards from the round as theirs.

If the values of the fractions are the same, flip over another set of cards and compare the new fractions to determine the winner of the round.

Continue with rounds in this way until one person has all of the cards and wins the game.

Variation: Use dominoes instead of cards with one side of the domino becoming the numerator and the other side becomes the denominator. The player with the greatest fraction wins the round and takes the dominoes.



ORDERING FRACTIONS

Use dominoes as fractions, with one side of the domino becoming the numerator and the other side becomes the denominator.

Choose five dominoes randomly. Order the fractions from least to greatest or greatest to least.



INTEGER NUMBER BATTLE



Use cards Ace through 10.

Deal out all the cards evenly among players. Black cards are positive numbers and red cards are negative numbers.

To begin, each player turns over two cards. Find the sum. The player who has the greatest sum wins the round. That player takes all the cards from the round as theirs.

If the sums are the same, flip over another set of cards and compare their sums to determine the winner of the round.

Continue with rounds in this way until one person has all of the cards and wins the game.

Variation: Use other operations- subtraction, multiplication or division.

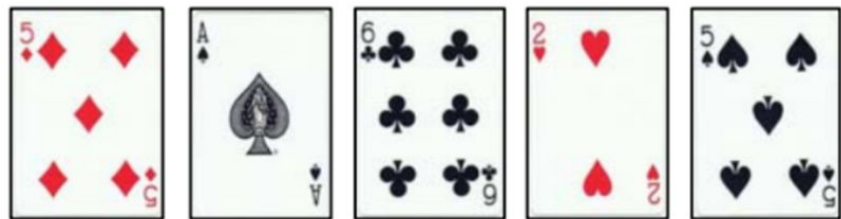


HIT THE TARGET

Use cards 1 (Ace) through 10.

Select a target number from 1 to 30. Then deal five cards to each player, face up. The object is to make a number sentence using all five cards with any operations to reach the target number.

Target: **20**



$$\begin{array}{c} 5 \\ \diamond \end{array} \times \begin{array}{c} 2 \\ \heartsuit \end{array} + \begin{array}{c} 5 \\ \spadesuit \end{array} + \begin{array}{c} 6 \\ \clubsuit \end{array} - \begin{array}{c} A \\ \spadesuit \end{array} = 20$$

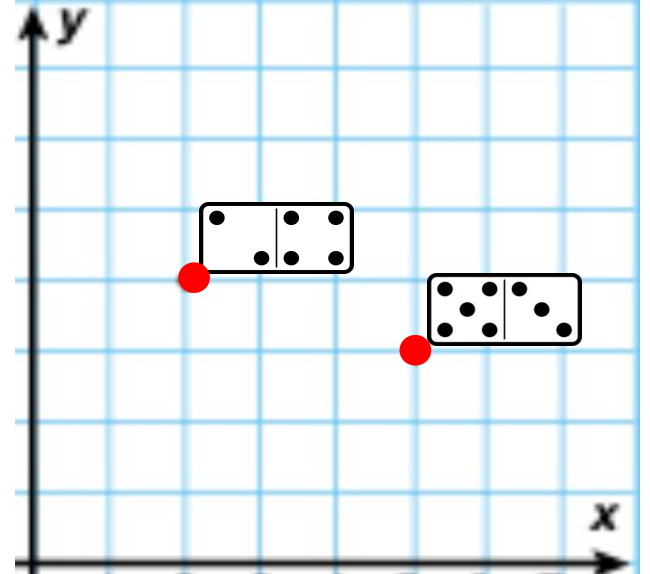
COORDINATE PAIRS

Use a blank coordinate grid and dominoes.

Select a domino. One side is the x-coordinate; the other side is the y-coordinate. Plot the point.

Repeat several times.

Variation: Connect the dots to make a unique design.



THANK YOU!