



6

2



3



8



STAGE TWO



NUMBER

BUSTING!

MATHS GAMES



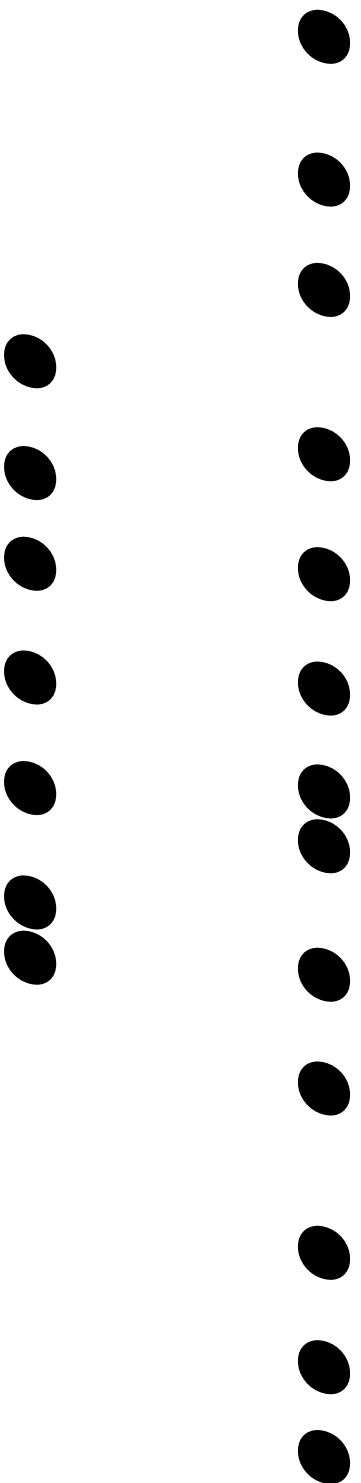
4



5

9





Dice Wars

2-4 dice

10 counters

SKILL: Addition or Multiplication

How to:

- Each player starts with 2 dice and 5 counters ('rocks').
- The objective of the game is to capture all of the other player's rocks.
- On the count of three, both players roll their dice. Each player adds up the sum of his/her two dice, and whoever has a higher number gets to "steal" a rock from the other player.
- Continue playing until one player has ALL 10 rocks.

Note: Encourage using strategies to add the dice quicker, eg. doubles, near doubles, friends of 10



Differentiation:

- Rolling a double trumps any other number, and you get to steal TWO rocks from the other player
- For older kids, try using three dice!
- You could practice multiplication instead of addition skills.

Guess My Number

Cards (Ace – 10)

SKILL: Number recognition, order and sequencing

HOW TO:

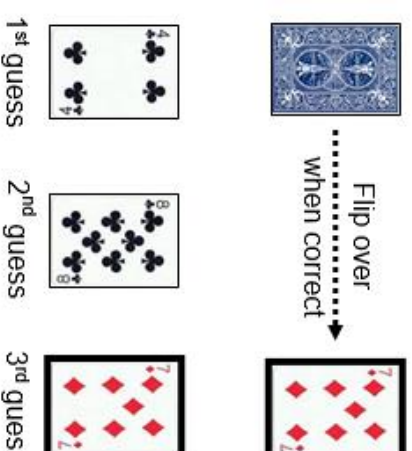
Each child gets a set of cards Ace through 10 (ace =1)
One player selects a 'secret card' for his/her deck and places it face down.

The second player tries to guess what the number on the card is by choosing a card from his/her hand and placing it face up.

The first player then tells whether the secret card is greater than or less than the face-up card.

The second player continues to make guesses by selecting and showing different cards until he/she discovers the secret number.

Players then switch roles.



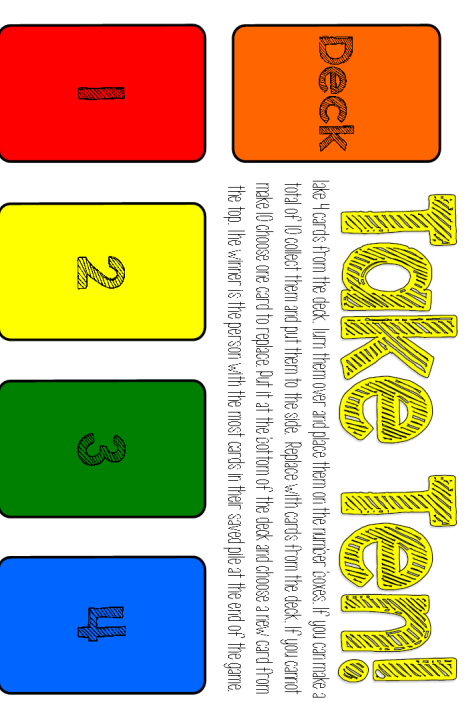
Take 10

40 cards: 1 (Ace) to 10

Skill: Friends of 10

How To:

- Take 4 cards from the deck.
- Turn them over and place them on the number boxes.
- If you can make a total of 10 collect them and put them to the side.
- Replace with cards from the deck.
- If you cannot make 10 choose one card to replace. Put it at the bottom of the deck and choose a new card from the top.
- Play until you can no longer make 10. Player 2 has a turn.
- The winner is the person with the most cards in their saved pile at the end of their game.



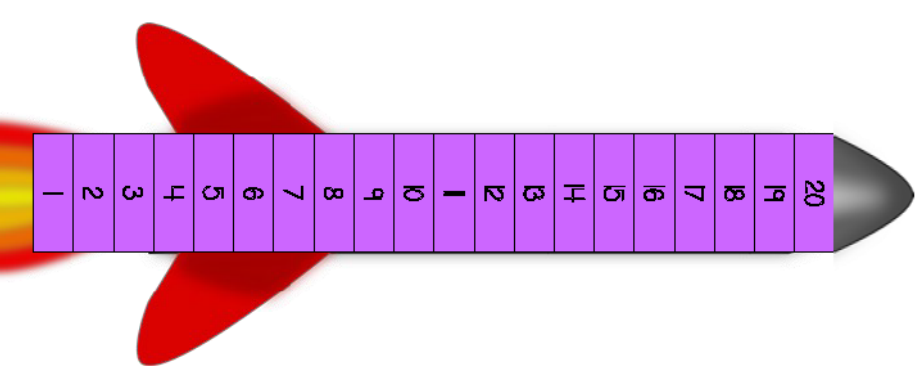
Rockets

Skill: Addition and Subtraction to 20

How To:

- Each student draws their own rocket.
- Roll a 6 sided dice and climb the ladder the number rolled.
- The winner is the first person to land exactly on 20.
- Keep rolling and adding/subtracting the dice until you reach 20.

Numbers 1-20 on paper
Dice



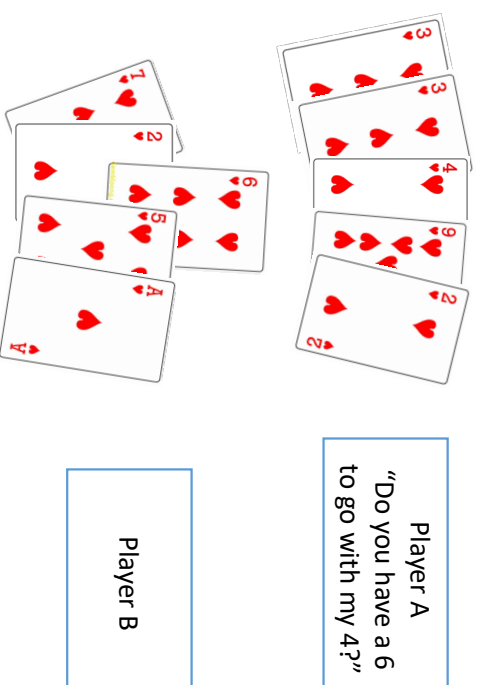
Go Fish – Make it 10

36 cards: 1 (Ace) to 9

SKILL: Friends of 10

Aim:

To have the most cards at the end of play.



How to:

This game is played just like "Go Fish." Instead of asking for a card to match your card, you have to ask for a card that would add with one of your cards to make a sum of 10.

Place Value War

36 cards: 1 (Ace) to 9

SKILL: Place Value

How To:

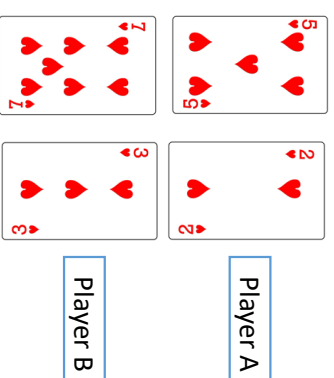
Shuffle cards and place in the middle.

Player A takes 2 cards and rearranges them to make the largest number possible, eg. cards 2 and 5 make 52. Player A places them on the table and says "I have 52"

Player B repeats this

eg. picks up cards 3 and 7.

"I have 73"



Winner is the person with the highest number who must be able to prove it.

eg. Player B says "I win because I have 7 tens which is 70 but you only have 5 tens which is 50"

Q: HOW DO YOU KNOW YOUR NUMBER IS HIGHER?

Differentiation:

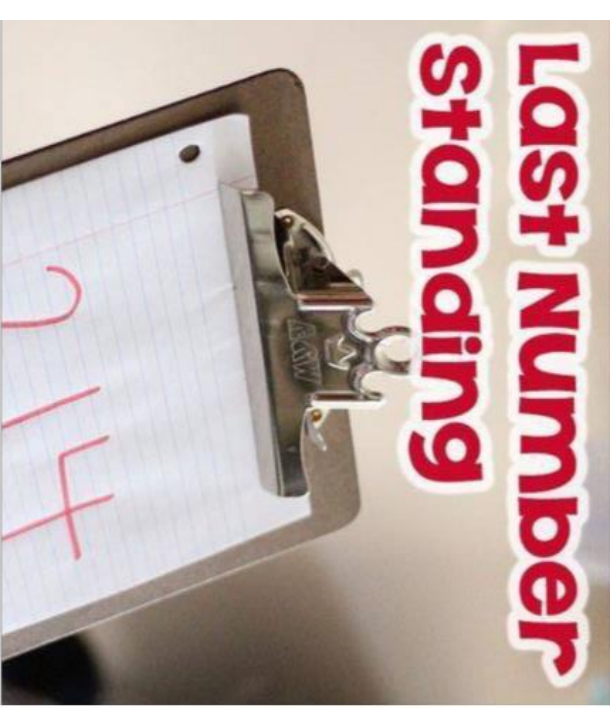
- use 3 (hundreds) or 4 (thousands) cards depending on how your child understands place value.
- Flip over 1 card at a time and say which value you will use it for before you flip over the next card — introduces the aspect of chance.

Last Number Standing

Skill: Place Value

How To:

- Students write down a 2 digit (or 3/4 digit) number on their paper
- Call out different place values, eg. Sit down if you have a 3 in the tens place
- Keep calling out different place value amounts until only one student standing
- This is The Last Number Standing



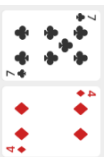



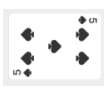
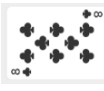

Magic Number

40 cards: 1 (Ace) to 10

Skill: Addition and Subtraction

How To:

- Give students a magic number, eg. 43
- Player 1 picks 2 cards and the totals are added together.
- Player 2 picks a card and adds the number to the previous total.
- Player 1 picks a card and its added to the running total.
- Play continues until they get the magic number.
- Students will need to start subtracting as the running total exceeds.
- Game continues until they hit the magic number so they'll need to add and subtract a few times.

Magic Number is 43		Running Total
Player 1		$7 + 4 = 11$
Player 2		14
Player 1		24
Player 2		32
Player 1		37
Player 2		45 (total is over so need to subtract next card)
Player 1		43 WINNER!

Take 100

Dice

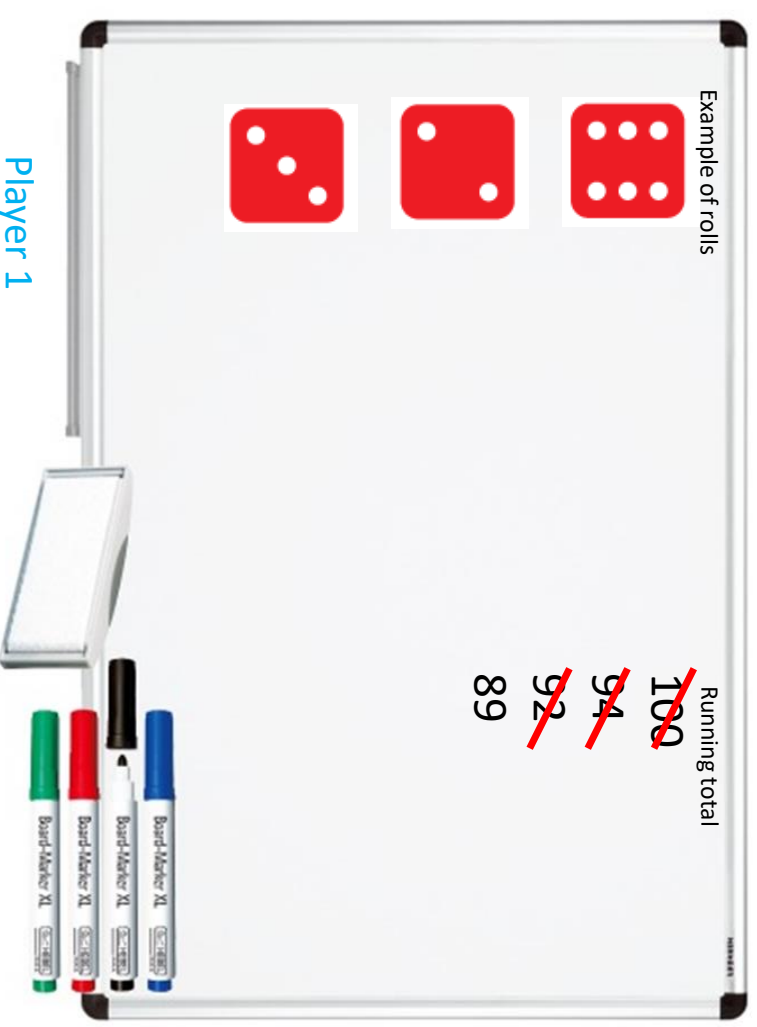
SKILL: Subtraction

Years 2/3:

Each student begins with 100 points. In turn, students roll a regular dice and subtract the number from their 100 points. The first player to reach zero is the winner.

Variations

- Change the number of points to begin.
- Add the dice together before subtracting them



Make and Round

36 cards: 1 (Ace) to 9

SKILL: Rounding to 10/100

How to:

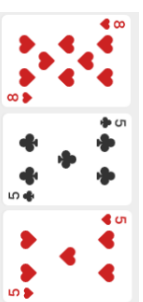
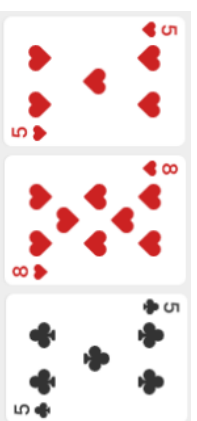
- Pick 2 cards from the deck and arrange them to make a 2-digit number.
- Round the number to the nearest 10 and cover that number.
- First to cover all their numbers wins.

Extension:

3 cards and rounding to nearest 100.

100	600
200	700
300	800
400	900
500	1000

Player 1



Or rearrange to make
85 and cross out 900



Take 100

2 Dice

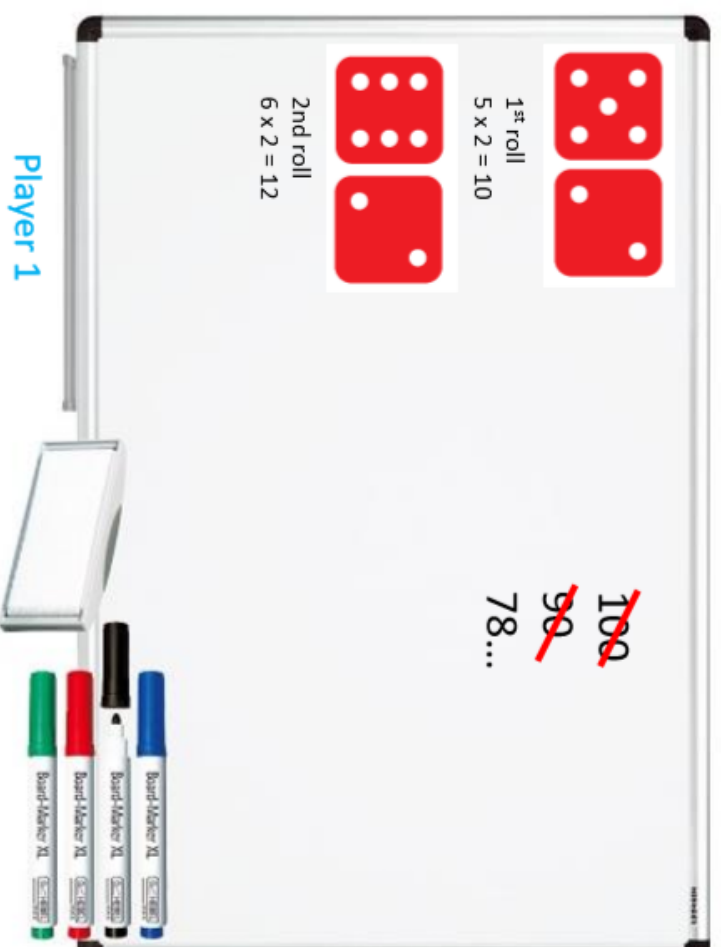
SKILL: Subtraction

Years 4-6:

Each student begins with 100 points. In turn, students roll a 2 dice and either add or multiply the numbers together before subtracting the number from their 100 points. The first player to reach zero is the winner.

Variations

- Change the number of points to begin.



Make 100

2 Dice

SKILL: Addition, Subtraction, Multiplication, Division

Years 4-8:

- The aim is to make a total of 100 or as close to 100 as possible.
- Players take turns to roll the two dice and combine the numbers with any operation to produce a score. The player who reaches 100 or is closest to 100 is the winner.
- Encourage players to record their choices and calculations.
- For example:

Dice throw	Calculation	Running total
4 and 6	$4 \times 6 = 24$	24
1 and 4	$1 + 4 = 5$	29
2 and 5	$2 \times 5 = 10$	39
6 and 6	$6 \times 6 = 36$	75
5 and 3	$5 \times 3 = 15$	90
2 and 3	$2 + 3 = 5$	95
6 and 1	$6 - 1 = 5$	100

5 Cards to 100

36 cards: 1 (Ace) to 9

SKILL: Addition

Aim:

To combine your cards so they equal 100. The winner is the person whose score is closest to 100 at the end of the game.

How to:

- The dealer hands out 5 cards to each player.
- Players combine the cards in their hand to try and make them equal 100, using addition only. They can combine numbers to make a two digit number, or keep them as single digit numbers.

Eg. $94 + 32 = 89$

Or $93 + 42 + 1 = 107$

- The player who has their answer closest to 100 wins.
- The cards are collected, shuffled and dealt again to start a new round.

Oh No! 99!

Skill: Addition and Subtraction

Card Values and Operations:

- Aces: add 1
- Jacks: subtract 10
- Queens: wild cards that can represent adding any number 1-10
- Kings: add zero
- All others (2–10): add their face value

How To:

1. One player shuffles the cards and deals four cards to each player. The undealt cards remain in a stack, face down.
2. Players take turns playing one card at a time, adding (or subtracting if you have a Jack) the value of their card to or from their jointly accumulating score.
3. Each time a player plays a card, he or she must replace it with the top card on the face-down stack.
4. Play continues until one player forces his or her partner to go over the score of 99.

Extra Support: the students use a number grid to 100 and circle numbers as they play.

Deck of cards



A Writing Assignment for Fifth Graders
When Caron taught the lesson in fifth grade, she gave the class this writing assignment.

"Imagine," I said, "that you're playing Oh No! 99! and the total is up to 87. Your four cards are a six, a queen, an ace, and a king. Which card would you play next?"

Factors and Multiples

A 100 square grid

Skill: Factors and Multiples

How To:

The first player chooses a positive even number that is less than 50, and covers it out on the grid with a counter.

The second player chooses a number to cover. The number must be a factor or multiple of the first number.

Players continue to take it in turns to cover numbers, at each stage choosing a number that is a factor or multiple of the number just covered by the other player.

The first person who is unable to cross out a number loses.

e.g. the following game started 12, 4, 44, 11, 77...

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

nrich.maths.org/roadshow

<https://nrich.maths.org/5468>

Magic Number

Deck of cards – can remove face cards

Skill: Addition and Subtraction

How To:

- Give students a magic number, eg. 43
- Player 1 picks 2 cards and the totals are added together.
- Player 2 picks a card and adds the number to the previous total.
- Player 1 picks a card and its added to the running total.
- Play continues until they get the magic number.
- Students will need to start subtracting as the running total exceeds.
- Game continues until they hit the magic number so they'll need to add and subtract a few times.








Extension:

Leave face cards in as Jack = 11, Queen = 12 and King = 13 and increase the magic number

Deck of cards – can remove face cards

Magic Number is 43

Running Total

Player 1		7 + 4 = 11
Player 2		14
Player 1		24
Player 2		32
Player 1		37
Player 2		45 (total is over so need to subtract next card)
Player 1		43 WINNER!

Multiplication Battle

Skill: Multiplication

Aim: To multiply numbers to win as many cards as possible.

How To:

- Deal the cards evenly among the players.
- One player throws the dice.
- Each player then flips up one card from their pile of cards.
- Each player multiplies the number of their card with the number rolled on the dice, the highest total wins the cards that have been flipped over.
- The player that is left with cards wins!

Extension – Add face cards to multiply larger numbers.

40 cards: 1 (Ace) to 10

Extension: include face cards
Dice

