



HOW TO PLAY TWO NUMBERS

Math children are practicing:

- Recognizing written numerals 1-6 (possibly up to 12)
- Placing numeral cards in the correct order
- Using one-to-one correspondence when counting
- Identifying the number of dots without counting (subitizing)
- Composing and decomposing numbers: Identifying the new number created when numbers are combined or separated

Materials

- 4 sets of *Two Numbers* cards with numeral and dice pattern (0 to 12)
- 4 game boards (double-sided):
 - 1-6 cards on one side
 - 1-12 cards on one side
- 2 regular dice
- 2 dot cubes with dots 1 to 5 and a choice side
- 2 dot cubes with dots 1 to 3

<i>Suggested Plan for Guided Math Groups, please modify for your class.</i>	
Game	Materials
Explore and put the cards in order	
Play 1-6 with 1 die	1 to 6 cards, 1 regular die
Play 1-6 with 2 dice with dots 1-3 only	1 to 6 cards, 2 dice with 1-3 dots
Play 1-12 with 2 dice	1 to 12 cards, 2 regular dice
*Play 0-12 with 2 dice	0 to 12 cards, 2 regular dice
Play game	

**Few preschoolers will be ready to play 0-12 with subtraction, but this is an option for those who are.*

Tips from the classroom:

- If you have children who have a hard time with a lot of materials on the table, use the game board instead of the cards. They won't get to practice putting the cards in the correct order, but they will benefit from playing the game.
- Often it's really hard to roll the last few numbers you need to turn over all the cards. If children are getting frustrated you can agree to alter the rules so if you roll a 1, it will and can be any number. Or you could play that you're allowed to add one or subtract one from any roll. Or you can agree to stop after a certain number of tries.

Questions to ask:

- What numbers do we still need to cover?
- What could we roll to cover that number?
- How many more do we need to cover?"
- I want to roll a... so I can turn this cards? What number(s) do you want to roll?

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Two Numbers**Praising the process:**

- I noticed you are...
- You're working hard!
- Good idea!
- Keep trying!
- I like how you took your time and worked hard on that.

Two Numbers (explore and order the cards)

1. Give each child the 1-6 cards in random order. (Remove the 7-12 and 0 cards for now).
2. Ask the children what they notice about the cards. Do they recognize the numerals? Do they count the number of dots?
3. Ask the children to put the cards in order from 1 to 6 (or smallest to biggest). Ask children to check to see if they have all the numbers 1 to 6.

Variation: For kids who are ready for more challenge give the cards 1-10, or even 1-12 or 0 to 12.

About the learning in this game. As children explore these new materials, see if they recognize the numerals and associate the written numeral with the number of dots, and associate both of those with the number word (e.g. three). Eventually, children need to relate these three concepts together—quantity, number words, and written numerals. Talk to children about how they can put the cards in order from 1-5. Some children might recognize the written numerals and be able to put them in order. Other children might use the dots to order them from the card with the fewest dots to the card with the most dots. You may need to help some children to put the cards in order—you can guide them to use the number of dots on the card and you can point out number charts in your classroom that they can reference for help.

Two Numbers: Share the Roll

1. Give each child a set of cards. Depending on what you know about the children use 1-5; 1-6; 1-10; or 1-12.
2. Ask children to arrange all of their cards in order. Check to see if they have all the numbers from 1-6 (or the range they are using).
3. In the game, children will try to turn all of their numbers face down. They'll each take a turn rolling the number cube(s). There are different options for the dot cubes you can use depending on the children you are playing with and how you want to play. You may want



to start with the 1 to 5 cards and the 1 to 5 cube until children are comfortable with the game.

Cards	Dot cubes	Free choice (if wanted)
1 to 5	1 - 1 to 5	Blank side of the cube is free choice
1 to 6	1 – regular die	Roll of  is free choice
1 to 6	2 – 1 to 3 cubes	Roll of   is free choice
1 to 10	2 – 1 to 5 cubes	Blank side of the cube is free choice
1 to 10	2 regular dice	Roll of 11 or 12 is free choice
1 to 12	2 regular dice	Roll of   is free choice
0 to 12	2 regular dice	Roll of   is free choice

4. Children take turns rolling the number cube(s) and turn over whatever cards they can based on the roll. All children can turn over their cards regardless of which child rolled the dice—they are “sharing the roll.” If they roll  and  they may turn over their 2 and 3 cards, *or* the sum, 5, *or* use whatever other operations players agree on at the start. If no card can be turned, the player waits for the next roll. In *Share the Roll*, players turn over whatever cards they can on every roll, not just when they roll. This way children can discuss what they want to do and why. It might be the same move as a friend or a different move. It is a good way for everyone to get comfortable and understand the game.
5. Play continues until one or all children have turned over their cards—you decide.

Tip: Having a choice side is really helpful. You can see if children use this choice wisely, i.e. if they pick a number that would otherwise be hard to get. It also speeds up the game a bit.

About the learning in this game. This first game has children turn their cards over every time anyone rolls the dice. It required less patience for kids waiting their turn and it also allows kids to talk about whether they can turn over the numbers they see or add them together—or even subtract! They can discuss the moves they want to make and why. It is a good way to help all children understand how the game is played because they can learn from each other.

Often children will get stuck in one way of playing. They will either want to always add the dots on the dot cubes or always want to just turn over the numbers that they see. Encourage children to switch between the options.

**Two Numbers: Who can turn over all their cards first? (Two Player)**

1. This game is just like the *Share the Roll* game except two children compete to see who can turn over all their cards first. They take turns rolling the dot cubes and only turn cards over on their roll.
2. Ask children to arrange all of their cards in order. Check to see if they have all the numbers from 1-6 (or the range they are using).
3. In the game, children will try to turn all of their numbers face down. They'll each take a turn rolling the number cube(s). There are different options for the dot cubes you can use depending on the children you are playing with and how you want to play.

Cards	Dot cubes	Free choice (if wanted)
1 to 5	1 - 1 to 5	Blank side of the cube is free choice
1 to 6	1 – regular die	Roll of  is free choice
1 to 6	2 – 1 to 3 cubes	Roll of  is free choice
1 to 10	2 – 1 to 5 cubes	Blank side of the cube is free choice
1 to 10	2 regular dice	Roll of 11 or 12 is free choice
1 to 12	2 regular dice	Roll of  is free choice
0 to 12	2 regular dice	Roll of  is free choice

4. Children take turns rolling the number cube(s) and turn over whatever cards they can based on the roll. If they roll  and  they may turn over their 2 and 3 cards, or the sum, 5, or use whatever other operations players agree on at the start. If no card can be turned, the player waits for the next roll.
5. Play continues until one child has turned over all their cards.

About the learning in this game. Once children are comfortable with the game, they can play in pairs without the teacher and see who can turn over all their cards first. For this game, you will want to pair children with fairly similar skills. Playing to see who can turn over all their cards first encourages children to think about strategy. Their rolls and the moves they make will vary which encourages them to think about different numbers and strategies.

Two Numbers: One player game

1. This game is just like the previous version except the child is playing alone. Rolling the die and turning over the cards.

About the learning in this game. When children know the rules of the game well they can play on their own. This allows for flexibility and accommodates different children's interest—they can play at their own level.