## The Big Idea:

Play the classic Bingo game with a twist to practice math facts!

## You Will Need:

* Dice: 2 or 3 . If you don't have dice, print the cube templates and make your own!
* Gameboard markers (e.g., cereal, buttons, Lego, pieces of paper)
* Print or draw: Rock ' $n$ ' Roll Bingo board


## The Math Behind the Scenes:

Kids will get on a roll with their math facts in this game, practicing basic operations of addition and multiplication to play the best numbers on their board using mental strategies.

## Game Set-Up

1. Each player needs a Rock ' $n$ ' Roll Bingo board. Print the one provided or make your own. The boards can have the same numbers in the same spots or in different spots - either way works!
2. You will need 2 or 3 dice based on the level of game play. For level 3 , identify 1 die as the Boss. If you're making your own paper dice, color in or decorate the Boss die to identify it easily. If using regular dice, you can put a tiny piece of tape on one to indicate the Boss die.

## How to Play

1. Choose the level that works for you:

Level 1: You roll 2 dice and players choose between the number shown on 1 die, or on the other, or the sum of 2 dice. Explain that if none of the choices matches an open square, you roll again.

Level 2: You roll 3 dice and players choose between the number on 1 die, the sum of any 2 dice, or the sum of all 3 (or roll again if no matches).
Level 3: At the start, show which of your dice is the Boss die (should be colored in or marked). Then roll the 3 dice and pick a number by either:

- multiplying the Boss by the 2nd die, OR
- multiplying the Boss by the 3rd die, OR
- adding together the $2 n d$ and $3 r d$ dice, then multiplying that total by the Boss.

2. Roll the dice and decide which number to pick on the Bingo board. If all possible spaces are occupied, the player waits for the next roll.
3. Each player takes a turn rolling for the group and announces the numbers on the dice. Each player decides how to use the dice to play a space on his/her own board.
4. When a player has covered 5 spaces in a line (horizontally, vertically, or diagonally), he/she calls out Bingo!

## Strategy Tips

## Level 1

What can help your chances of creating a winning row? Figure out how you can choose a sum that lands in line with more numbers filled in.

Are some spaces less likely to be chosen? See if you notice that some numbers, like 9 and 6, appear twice on the Bingo board.

## Level 2

Are all sums equally likely to be rolled? What are all the ways you can roll a total of 3 using all the dice?

- There's only 1 set: 1,1 , and 1.18 is equally unlikely: only 6 , 6 , and 6 will work!
- If you suggest $12(4,4,4), 12$ is more likely to appear: because other sums add to 12 ! such as $1,5,6$, or $2,5,5$, and so on.
Level 3
Are some numbers less likely to be rolled than others? Can this help you choose rows that are likely to win?

