



# Dice Games for Building Math Skills

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If you need dice, there are several FREE apps available in both GooglePlay and the iTunes App Store.

## Fig: (Grades 2 +)

- *Need:* 1 Die and Pencil/Paper \*\*\* Youngest player goes first
- *Goal:* Be the first player to reach 100 points.
- On each turn, the player rolls the die. They can continue to roll until a 1 is rolled OR they choose to hold.
- If a 1 is rolled, the score recorded is 0. If the chose to hold, they record the total number rolled.

### VARIATIONS:

- Play with two dice. One 1 is a score of zero. Double 1 is a score of 25.
- Play with 5 dice. Each 1 is a deduction of 10 and the die is put to the side. If down to 1 die and a 1 is rolled, the score is 0.

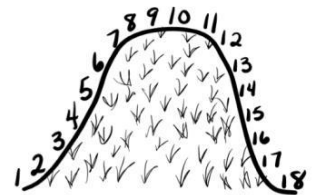
## Compare: (Pre-K – 5)

- *Need:* 2 dice for each player \*\*\* Youngest player goes first
- *Goal:* Win 10 rounds.
- Each player rolls their two dice and add them together. The player with the highest score wins the round.

### VARIATIONS:

- Play with one die and compare the amount on each die.
- Use 3 or 4 dice and take turns rolling.
- Multiply the two numbers on the dice instead of adding.
- Use four dice and create two 2-digit numbers to add together.

## Over the Hill: (Grade 1 +)



- *Need:* 3 Dice and Pencil/Paper with a hill drawn as seen in the picture. \*\*\* Oldest player goes first
- *Goal:* Cooperative Game –Work together to get to cross of 18.
- Players take turns rolling all three dice. They need to add or subtract the amounts on the dice and then cross off those sums or differences on the hill.
- Players cross numbers off in numerical order starting at 1 and will cross off as many numbers as possible each turn. When they cannot cross any numbers off, it is their partner's turn.
- Everyone wins when you get to 18!
- EXAMPLE TURN: Player A rolls 3, 4, 6. She can cross of 1 ( $4-3=1$ ), 2 ( $6-4=2$ ) and 3 ( $6-3=3$ ). She cannot make a sum or difference of 4 so now it is her partner's turn.

## **Shut the Box: (Grade 1+)**

- *Need:* 2 Dice and Pencil/Paper \*\*\* Oldest player goes first
- *Goal:* Have the smallest sum at the end of the round
- Player 1 writes the numbers 1 through 9 on a piece of paper.
- Player 1 rolls two dice and crosses out numbers on the paper that have the same sum as the dice.
- EXAMPLE TURN: Player 1 rolls 8. She can cross off 8 or 7 & 1 or 6 & 2, or 5 & 3, or 5 & 2 & 1, or 4 & 3 & 1.
- Player 1 continues to roll until she can no longer cross off numbers. If the sum of the numbers on the paper is 6 or less, only one die can be rolled.
- Player 1 adds up the remaining numbers. This is her score for the round.
- Player 2 writes the numbers 1 through 9 on a piece of paper and rolls to start his turn.
- Any player that crosses off all numbers or "Shuts the Box" wins and the round is immediately over.
- If no players shut the box, the player with the smallest sum at the end of the round wins.

## **Going to Boston (Grade 1+)**

- *Need:* 3 Dice and Pencil/Paper \*\*\* Oldest player goes first
- Player 1 rolls three dice, pulls out the highest number and sets it aside. Then rolls the remaining two dice and pulls out the highest number again. Finally rolling the final die one more time.
- Level 1: Add all three dice. The highest total wins the round!
- Level 2: Add the first two dice and multiply by the third. The highest total wins the round!
- Play 5 or 10 rounds.

### VARIATIONS:

- Play with two dice for younger children.
- Keep the lowest numbered die instead of the highest.
- Increase the number of dice to 4.
- Add all four together.
- Add the first two, the second two and multiply the sums.