



# Maths games Using Dice, Dominoes and Cards

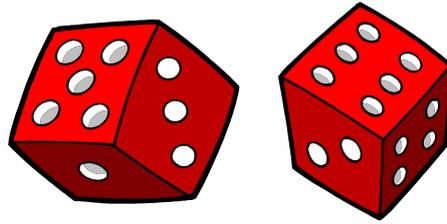


## Why should children play maths games?

- Develops turn taking, sharing and collaborative skills.
- Develops thinking, memory skills and concentration.
- Develops speaking and listening skills and helps to extend vocabulary.
- Improves mental calculations- rapid recall of number facts.
- Encourages competition, children learn to how to win and how to lose.
- Encourages children to work independently without the teacher/ parent.
- Very affordable- buy resources from as little as 50p.
- Structured images aid learning and promote abstract understanding (e.g. the visual image of 5 spots on a dice)
- FUN!

## 1-6 Dice

### Odds and Evens



- Two players- one is odd and one is even.
  - Each player rolls a dice.
  - Add the two numbers together. Is the total odd or even?
  - If the total is even the "even player" wins a point/ counter and vice versa.
  - The winner is the first player to reach 10 points.
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- Or a variation of this game is to score the total. The first player to reach 50 is the winner.
  - Or start at 50 and subtract the total.
  - Is this game fair? Why? What scores are possible?
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- Or roll one dice. If the number is odd you double it. If the number is even you half it. Have 10 throws each; add your scores each time. The player with the highest total score after 10 throws is the winner.

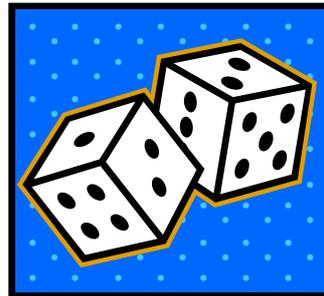
## 1-6 Dice



### Aim for 50

- 1 v 1 ( or 2 v 2)
- Roll four 0-6 dice.
- Use any operations- addition, subtraction, multiplication or division. Encourage older children to use brackets.
- The closest to 50 wins.
- E.g Roll 4, 6, 1, 6  
You could do  $((6 + 6) \times 4) + 1 = 49$
- This is a bit like the maths game on Countdown.

## 1-20 Dice



### Factors

- Roll a 1-20 dice twice.
- Choose which number will be your multiple number.
- Work out all the factors of your multiple number.
- Add the factors together and this becomes your score.
- The first player to reach 100 is the winner.

## 0-9 Dice



## Killer- Closest to 50

- Up to 4 players (1 v 1 or 2 v 2)
- Aim of the game is to make a number as close to 50 as possible.

Make a grid

T	0

T	0

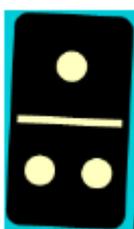
- Player 1 rolls the dice and decides where to put the digit- in the tens column or in the ones column.
- Player 2 rolls the dice and decides where to put the digit- in the tens column or in the ones column
- Player 1 rolls again and completes their number. Player 2 does the same.
- The closest to 50 is the winner.
- You can extend this game by introducing the < and > symbols at the end to compare the 2 numbers.
- You can calculate the difference between the two scores.
- You can link this game to probability.
- You can extend using 3 digit numbers or even decimals.
- Another variation is that you can decide to put your number in your opponent's box to try to prevent them from winning.

## Dominoes



## Fractions

- Remove all the blank dominoes from the set.
- Place all the dominoes face down on the table.
- Both players turn a domino over.
- Make a fraction by rotating your domino vertically. Remember the smallest number need to go on the top.



becomes  $\frac{1}{2}$  and



becomes  $\frac{2}{5}$

- Who has the smallest/ largest fraction?
- Pick another domino and start to sequence the fractions from smallest to largest.
- Can the same fraction be represented using different dot combinations? Find the equivalent fractions. Convert using common denominators.

## Cards

## 1 More Snap

- Similar rules to snap but.....you can only say snap if the value of your card is one more than the previous card e.g 7 of diamonds is on the table, I have 8 of hearts SNAP!
- You can vary this game by playing 2 more snap, 2 less snap etc etc



## Avoid multiples of 7

- Individuals play against each other.
- Use ace to 10 in all 4 suits but take out the 7s.
- Deal 5 cards each.
- First player lays a card on the table.
- Second player lays a card next to it.
- Add the card totals together. The total must **not** be a multiple of 7.
- Vary the game by avoiding other multiples, or by adding the total of all the cards on the table not just the last 2 or 3.
- If you can't go, you have to pick up another card from the pack. The winner is the first player to get rid of all their cards.

