

Fun maths games using cards, dominoes & dice

Differences

A game for 2-4 players

You will need: Paper, pencil and a die

How to play: Take turns to throw a die and subtract the number thrown from 10 (or any other given number). Your score is the difference between the number thrown and 10. The first player to reach 50 is the winner.



$$10 - 5 = 5$$

Score 5

Score 5 (5)
Score 4 (5 + 4 = 9)
Score 8 (9 + 8 = 17) ...

What's the Difference?

A game for 2-3 players

You will need: Paper, pencil and two 1-6 dice

How to play: Take turns to throw two six-sided dice together and make two 2-digit numbers. Then find the difference between the 2-digit numbers you have made and 30. You score the largest difference you can make. The first to score a total of 50 or more is the winner.



$$32 - 30 = 2$$

or

$$30 - 23 = 7$$

Approximate Multiplication

A game for 2 players

You will need: Paper, pencil and two dice

How to play: Both throw two dice and multiply the numbers you have thrown. The player with the biggest product scores a point. The first player to collect 10 points is the winner.



$$5 \times 3 = 15$$

Tic – tac – toe

A game for 2-4 players

You will need: Two dice, one marked 3, 4, 5, 6, 7, 8 and the other marked 4, 5, 6, 7, 8, 9 and different coloured counters for each player.

How to play: Roll both dice and find the product. Locate your number on the gameboard and cover it with your coloured counter. If your answer does not appear on the board, wait until your next turn. The first person to get four in a row horizontally, vertically or diagonally is the winner.

48	42	18	56	40	32	35	15	30	35
20	21	20	54	24	15	35	45	42	64
32	24	36	48	28	32	56	12	32	24
28	35	72	42	27	56	24	15	42	27
32	63	36	18	48	20	56	72	54	24
20	24	30	24	40	15	48	56	25	20
42	30	16	24	30	12	20	56	35	56
64	40	24	36	24	16	28	24	12	28
25	35	40	20	63	42	40	24	30	20
24	18	49	56	45	24	32	21	36	48

2, 5, 10

A game for 2 players

You will need: One normal dice and one labelled x2, x2, x5, x5, x10, x10 and set of coloured counters for each player.

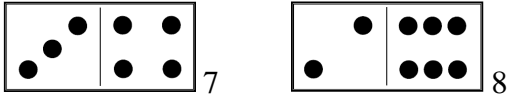
How to play: Roll the two dice and work out the answer. Look for the answer on the grid and cover it with a counter. If you cannot find your answer on the board, wait until your next turn. The winner is the first player to get four counters in a row either horizontally, vertically or diagonally.

20	50	8	30	6	2	30
40	12	60	4	10	60	50
15	6	2	25	30	20	8
60	30	10	9	5	6	4
10	4	8	20	15	15	10
30	5	25	50	10	20	5
12	20	40	2	40	12	25

Find the Total

Play this game with a friend.

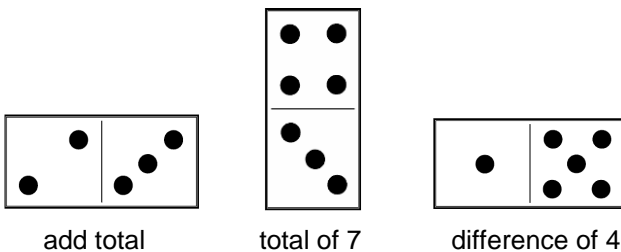
Spread all the dominoes face down on the table. Choose a domino each and count the spots



Whoever has the highest number of spots keeps both dominoes. If the total is the same, keep one each.

Carry on until you have used all the dominoes and see who wins the most.

Simply Sort

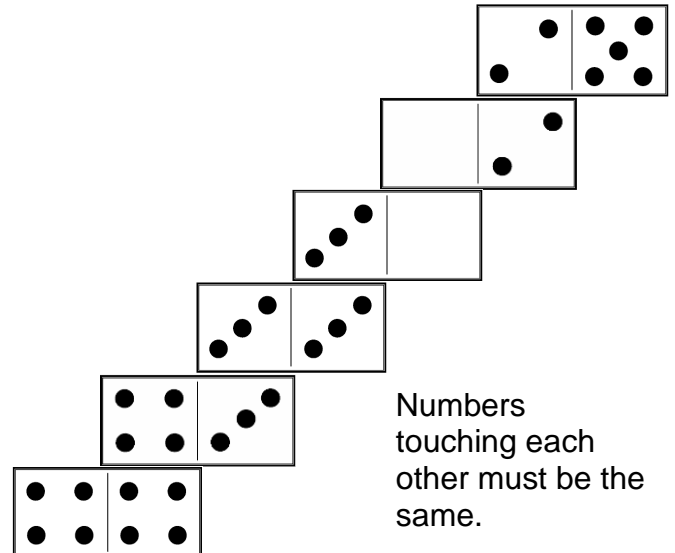


Sort the dominoes in different ways.

- Find all the dominoes with the number 4 on them.
- Find all the ones with odd or even total.
- Find all the ones with the same totals.
- Find all those with the same difference.
- Find all the doubles.

Staircase

With a partner, make a long stairway with all the dominoes.



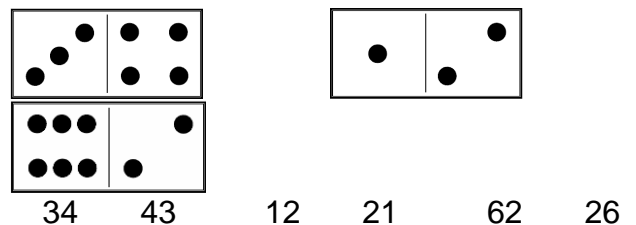
Numbers touching each other must be the same.

Can you make a stairway if the numbers touching have a difference of 1?

Ordering Numbers

Mix up the dominoes and choose three.

Make two 2-digit numbers from each of the dominoes.

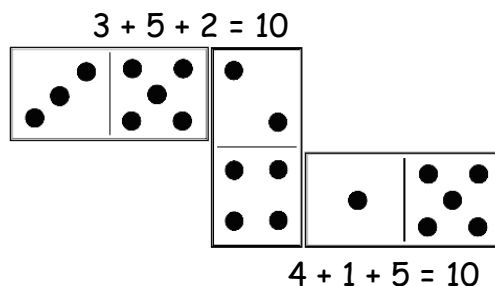


Write the size numbers you have made in order, with the smallest first.

12 21 26 34 43 62

Zig-Zags

Use three dominoes to make a zig-zag where the spots in each row add up to 10.

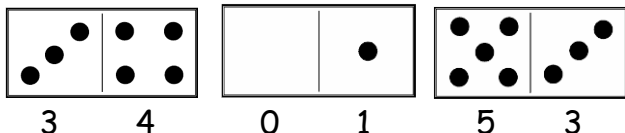


How many different zig-zags can you make?

What do all the spots in each zig-zag add up to?

Make 10

Choose three dominoes and look at the numbers.



Write the numbers in order, then underneath each one write how many you would need to add to make 10.

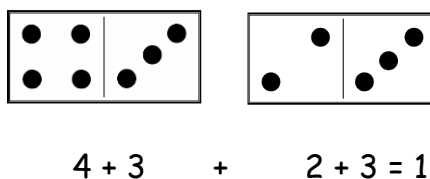
0	1	2	3	4	5
10	9	8	7	6	5

Try again with three different dominoes.

How many would you need to add to make 20?

Total Two

Choose two dominoes and add the numbers.



What is the difference between the total and 20?

$$20 - 12 = 8$$

Try with two different dominoes.

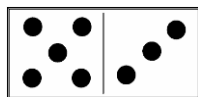
What is the highest total you could get?
What is the lowest?

What's the Difference?

A game for two players.

Spread the dominoes face down on the table.

Take turns to pick a domino and work out the difference between the two numbers.



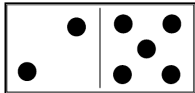
$$5 - 3 = 2$$

The difference is your score. Keep adding your scores.

The winner is the first player to reach 20 points.

(You may wish to remove the dominoes with blanks.) Play this game with a friend.

Mix the dominoes and spread them face down on the table. Take turns to choose a domino, make two 2-digit numbers from it and find the difference between them.



The difference between the numbers is your score. Keep adding your scores.

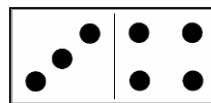
The first player to reach 200 is the winner.

Do you notice anything about the differences?

Play this game with a friend.

Mix the dominoes and spread them face down on the table and take turns to pick one.

Multiply the numbers to get your score.

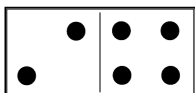


Keep adding your scores.

The first player to reach 200 is the winner.

Play this game with a friend.

Mix the dominoes and spread them face down on the table. Take turns to choose a domino, make two 2-digit numbers from it and add the numbers together.



The total of the two numbers is your score. Keep adding your scores.

The first person to reach 500 is the winner.

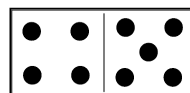
(With the blank dominoes one number will need to be a single-digit one, e.g. 20 and 02.)

Four in a Row

You need a grid like this, and a partner.

18	1	0	15	8	5	30
12	0	36	0	4	16	0
24	10	3	12	0	0	9
2	0	20	4	6	25	6

Take turns to pick a domino and multiply the numbers. Use each domino only once.



$$4 \times 5 = 20$$

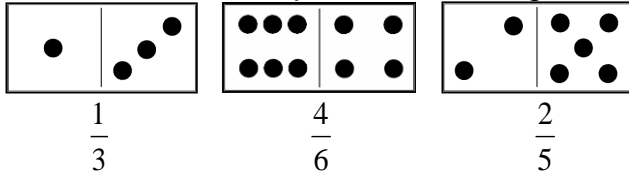
Cross out the answer on the grid, using a different colour for each player.

The winner is the first to cross out four numbers in a line, in any direction.

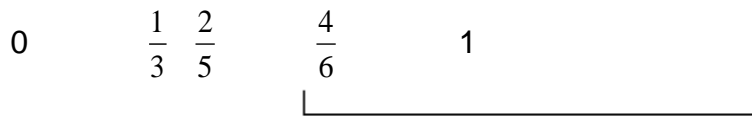
Fractions Number Line

Pick any six dominoes.

Use the number of spots to make vulgar fractions.



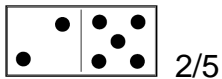
Draw an empty number line from 0 to 1 and mark the place where each of your fractions would go.



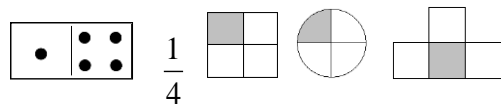
Fractions Drawing

Take out all the dominoes with a blank. Use all the rest.

Draw a fractions picture for each domino.



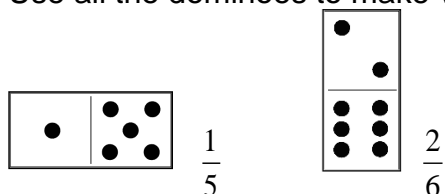
Can you think of more than one way of showing some of the fractions?



Can you draw the same picture for more than one domino fraction?

Fraction Pairs

Use all the dominoes to make vulgar fractions.



Find pairs that add together to make 1.

$$\frac{2}{3} + \frac{1}{3} = 1$$

Can you pair all the dominoes in this way?

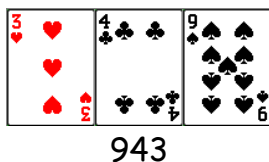
Or are there some left?

3 Digit Deals

A game for two or three players. You need the numbers cards from 1 to 9 from each suit.

Shuffle the cards and deal three to each player.

Whoever can make the largest 3-digit number with their cards wins a point.

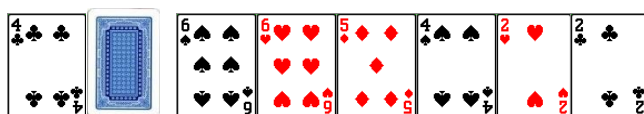


Used cards are placed on the bottom of the pack and play continues until one player has 10 points.

Number Bust

The aim of this game is to make the largest 6-digit number possible.

Using the number cards 1 to 9 from each suit, deal each player six cards. The rest of the pack is placed face down on the table, with one card turned over to start the discard pile.

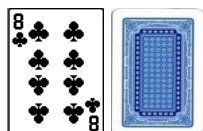


Take turns to take a card from the top of the pack or discard pile. Then discard one from your hand. The winner is the player with the largest 6-digit number once the whole pack has been used.

More or Less

A game for up to four players. Shuffle the cards and deal out seven each, placing the rest of the pack face down on the table, with one card turned face up to start the game.

Players take turns to place a card with a value one more or one less than the number on the card face up. An ace can count high or low. If a player cannot go, they pick up another card from the pack.



The winner is the first player to get rid of all their cards, or the one who has the least left when no more cards can be played.

Adding Small Numbers

Spread a set of digit cards face down on the table. You need to work with a partner who can check your answers and keep time.

Turn over three or four cards and see how quickly you can add the numbers and write down the answer. Replace the cards, mix them up and try again.

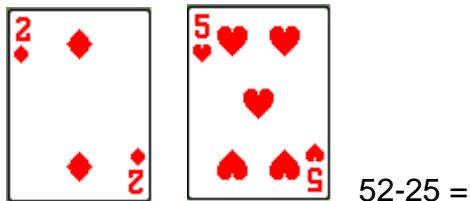
Score a point for correct answers.

How many points can you get in two minutes?

Mental Differences

Use the number cards from 1 to 9 from each suit. Shuffle the cards thoroughly.

Two players each take two cards from the top of the pack and use these to make two 2-digit numbers.



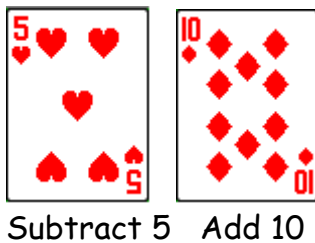
Players score the difference between the two numbers they make, the winner being the first to reach a total score of 200.

Negative and Positive

Use the number cards only.

All players start with a score of 0 and take turns to turn over the top card of the back.

If it's an odd number, subtract it from your score. If it's an even number, add it to your score.

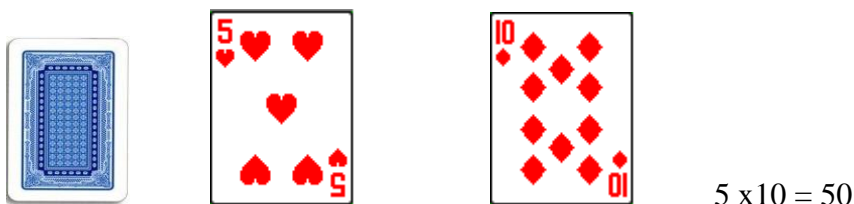


The winner is the player with the highest score once all the cards have been used.

Simply Multiply

You need a friend and a set of digit cards shuffled and laced face down in a pile.

Take turns to turn over two cards, multiply the numbers showing and score the product. Do not replace the cards, but shuffle them again when they have all been used.



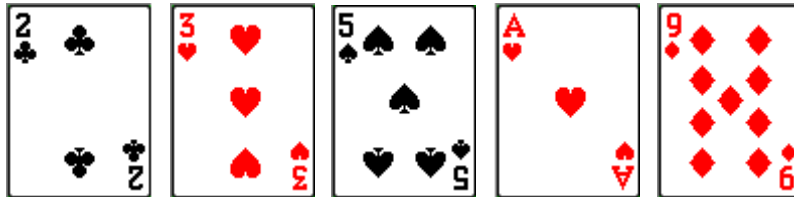
Keep a running total of your score. Winner is the first player to reach 250 or more.

Target Game

A game for unlimited players

You will need: A Pack of playing cards and a collection of target numbers.

How to play: Each player/pair are given 5 different number cards. Using any or all of the five playing cards and any operation (add, subtract, multiply or divide) make the target number. The task is harder if all the cards have to be used. When the children are confident, you could introduce a time limit.



19 $5 \times 2 + 9$