



This game is a simple at home version of the TV favourite and can be played with any number of players.

#### What you need to play:

- 4 'large number' cards with the numbers 25, 50, 75 and 100 on them
- A set of cards with the digits 1-10 on them, with at least two cards for each number

#### How to play:

- *Step 1:* Set out 4 large number cards (25, 50, 75 and 100) face down and mixed up.
- *Step 2:* Do the same with the 1 - 10 cards, making sure you have at least 2 cards for each number.
- *Step 3:* Players take it in turns to select one of the big number cards or one of the small number cards, until there are 6 cards laid out all together.
- *Step 4:* Someone who is playing the game needs to generate a 3-digit number. This can be by throwing a dice, or selecting cards from a pile of 0 to 9 cards.
- *Step 5:* Once the number has been generated, turn over the six cards and players have to try and get to that total using any of the six number cards and any of the four operations.
- Each card can only be used once and the winner is the first person to reach the total, or the player who is closest after a set length of time.
- The game can be adapted for younger children, by choosing the numbers on the cards carefully and having them aiming to reach a 2-digit number, rather than a 3-digit number.

[https://youtu.be/RZgkr5\\_Xn58](https://youtu.be/RZgkr5_Xn58)

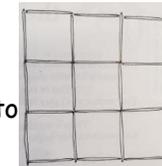
#### How many squares?

#### What you need for this activity:

- 24 toothpicks/cotton buds/small strips of paper

#### How to do this activity:

Arrange the toothpicks like



How many squares do these toothpicks make?

What is the least number of toothpicks you need to build 1 square?

What about 2 squares then 3 squares and so on?

Can you find a pattern?



Using 12 toothpicks, place them any way you wish. How many different numbers of squares can you make?

#### Bang Bang

*Step 1:* 2 players stand back to back, cowboy shootout style.

*Step 2:* A question is called out, such as 'what is  $7 \times 6$ '

*Step 3:* The first player to turn, face their opponent, shout 'bang bang' and to give the answer wins the round.

*Step 4:* This is then repeated until a number of points, decided at the start of the game, is reached. That player is then the winner.



## Code breakers

How to do this activity:

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>
107	90	231	236	473	105	53	124	84	251	274	372	369
<b>N</b>	<b>O</b>	<b>P</b>	<b>Q</b>	<b>R</b>	<b>S</b>	<b>T</b>	<b>U</b>	<b>V</b>	<b>W</b>	<b>X</b>	<b>Y</b>	<b>Z</b>
254	179	187	125	344	373	67	74	38	124	424	398	65

Using the alphabet and number code above, create your own secret message using calculations to break it.

So each calculation you create will reveal one of the letters above.

e.g. For the word HI

$$200 - 76 = 124 = H$$

$$12 \times 7 = 84 = I$$



**The 24 Game** - <https://youtu.be/HeO0q0cSvx0> - Using a pack of playing cards (the number cards only)

**How to play:**

*Step 1:* Each player picks 4 number cards at random from the pile.

*Step 2:* They then need to find a way to manipulate the 4 digits using any of the 4 operations (+, -, x, ÷) so the end result is 24 For example, if they chose 4, 7, 8, 8, they could do  $(7 - (8 \div 8)) \times 4 = 24$

*Step 3:* If nobody is able to reach 24, you can make it closest wins!

## Triangle Tower

### What you need to play:

- Two dice
- A sheet of paper
- Counter or coins

### How to play:

*Step 1:* Draw out a triangle made from squares, with four on the bottom up to one at the top.

*Step 2:* Each player chooses 10 number from the products table (1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, 16, 18, 20, 24, 25, 30, 36). This is simply all of the possible options you can get when multiplying the numbers between 1 and 6 together.

*Step 3:* Write one number in each of the ten triangles from the product table results above.

*Step 4:* The first player then rolls 2 dice and multiplies the two numbers together. If they have the product of the two numbers written on their tower, they can then cover it with a counter.

*Step 5:* The winner is the first player to cover all their numbers in the tower.



The game can include more challenging multiplication calculations by changing the numbers on the dice.

If one has the numbers 1-6 and the second has the number 7-12, the numbers each player has to choose from are (7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 21, 22, 24, 27, 28, 30, 32, 33, 35, 36, 40, 42, 44, 45, 48, 50, 54, 55, 60, 66 and 72)

Alternatively, both dice marked with the numbers 7 - 12 would give the products 49, 56, 63, 64, 70, 72, 77, 80, 81, 84, 88, 90, 96, 99, 100, 108, 110, 120, 121, 132 and 144.

