

Math and Geometry

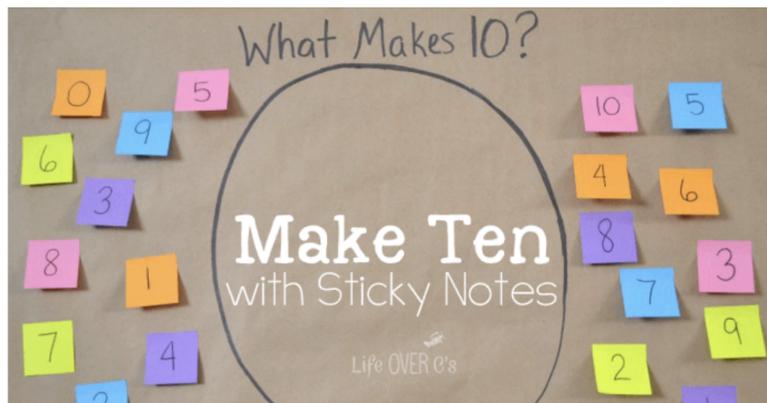
- **Daily Math Practice** - Khan Academy: Please use our class code so that we are able to monitor your progress and practice.
- **Math Facts** - Have you ever made a Cootie Catcher?



They are great fun for learning a lot of things. Here is a video with clear instructions for making one and using it to practice many kinds of math facts. Have fun and enjoy!

[Makerspace STEAM Activity - Maths Fortune Teller](#)

- **The Decimal System**



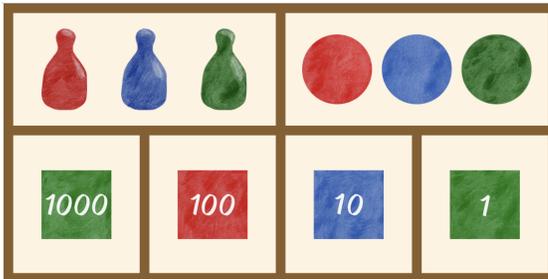
Use sticky notes to make 10. Knowing intimately the number combinations that make 10 is a very useful skill when it comes to mathematical computation. This activity uses a simple visual as another way to practice making the number 10.

Make two sets of the numbers 0 through 10 on individual sticky notes. Draw a circle on a paper (or use some other type of visual to place the notes) and take turns placing numbers in the area. The rule is you need to get to 10, but not over

10. For example, if I place a sticky note of 3 in the circle. Then my friend might place the number 2. I can then place any number up to 5, but I can't go over 5 or else I'll go beyond 10. If I place a 5, then the set is over. If I place a 2, then the set continues with my friend placing another number. The set is over once you reach 10, (but do not go beyond 10).

After playing this using addition, you can switch to subtraction, where you need to start at 10 and get to exactly zero.

- **Stamp Game**



Use this digital Stamp Game to solve addition problems.

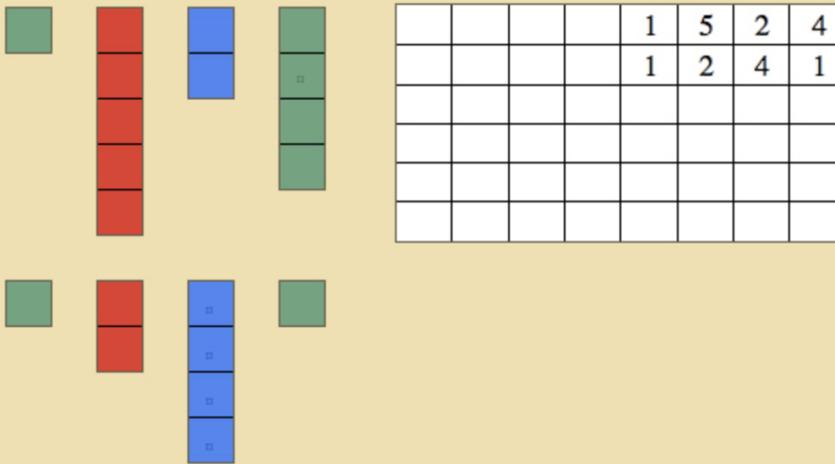
<https://montessori.tools/stamp-game>

Note: You or your child should have some experience with changing out tiles or beads from one category to another. If you need assistance with this, then contact us and we'd be happy to explain. Exchanging out is what is done on many of the Montessori math materials, so if your child has experience with this, then they will be familiar with doing this with the Stamp Game material.

Short (static) addition

Static Addition

1. Show the child the paper on which we write our problems.
2. Tell the child that the first column is where we write the units. The second column is where we write the tens, the third column is where we write the hundreds, and the fourth column is where we write the thousands.
3. Write a number, such as 1524 and read it with the child as: 4 units, 2 tens, 5 hundreds, and 1 thousand. Then read it: 1524.
4. Have the child create the number using the tiles.
5. Tell the child that we are going to make another number.
6. Show the child that you will write this new number below the first number on the piece of paper.
7. Write: 1241 and read it with the child as before.
8. Show the child that we will place the tiles for this number a little below the other tiles.
9. Have the child create this number using the tiles.



10. Tell him that we will see how much we have all together.
11. Tell the child that we show this by using the addition sign. Show the child the sign and where to place it on the paper.
12. Then draw a line under the last number using the ruler.
13. Have the child count all of the units: $4 + 1 = 5$
14. Write in 5 under the units on the paper.
15. Have the child count the tens, hundreds, and thousands, each time writing the answer down.
16. Read the final answer with the child: When we have 1524 and we add 1241 we get 2765!

				1	5	2	4
			+	1	2	4	1
				2	7	6	5

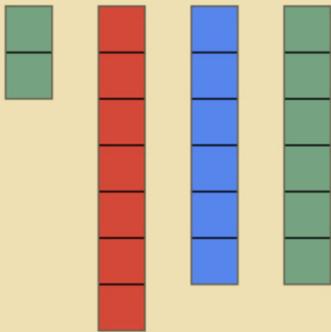
17. Allow the child a turn with another example. Guide him with questions.

After doing one or two together, the child can solve more problems which you will make for them (assuring they are static problems, i.e. no carrying into another category is required).

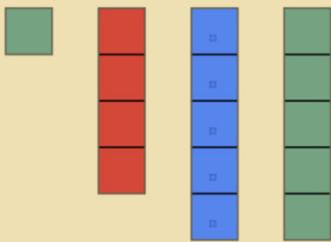
Long (dynamic) Addition

Dynamic Addition

1. Have the child construct and write the first add-in, first the units, tens, hundreds, and then thousands.
2. Have the child write another add in, but guide the child so that there will be a need to change the numbers.
3. Have the child construct the two numbers using the tiles.
4. Count all of the tiles and notice that you are going to need to change some of the tiles. Have the child do so.



				2	7	6	6
			+	1	4	5	5
				<hr/>			



5. Read the finished problem with the child.

				2	7	6	6
			+	1	4	5	5
				<hr/>			
				4	2	2	1

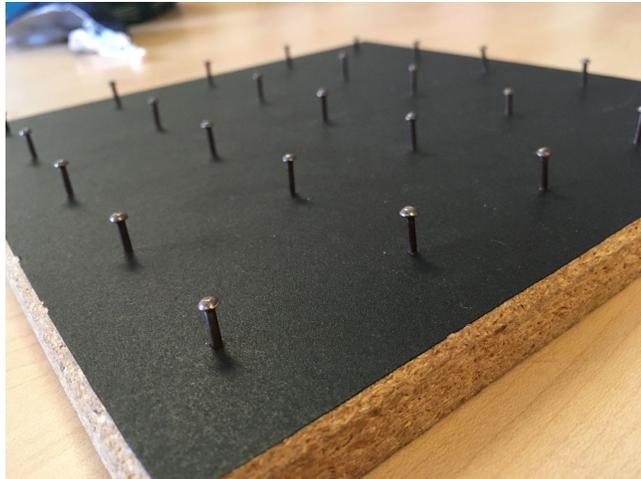
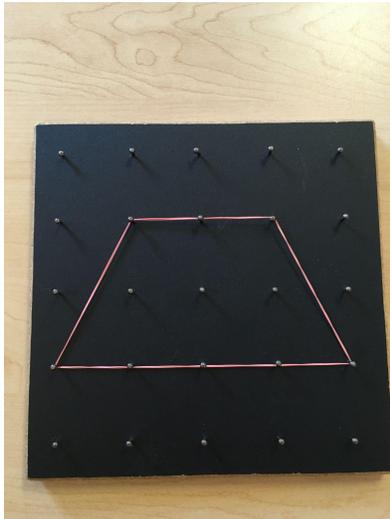
6. Allow the child a turn with another example. Guide him with questions.

In these instructions it mentions “a need to change the numbers”. This means that the two numbers in a column will equal something greater than 9. When this is the case then tiles need to be exchanged to the other category. Please contact us if you should need assistance with this.

Geometry:

Making geometric polygons

Use this geometry nail board and a rubber band to make different geometric shapes. This is a fun material for the child and adult to make together.



Needed:

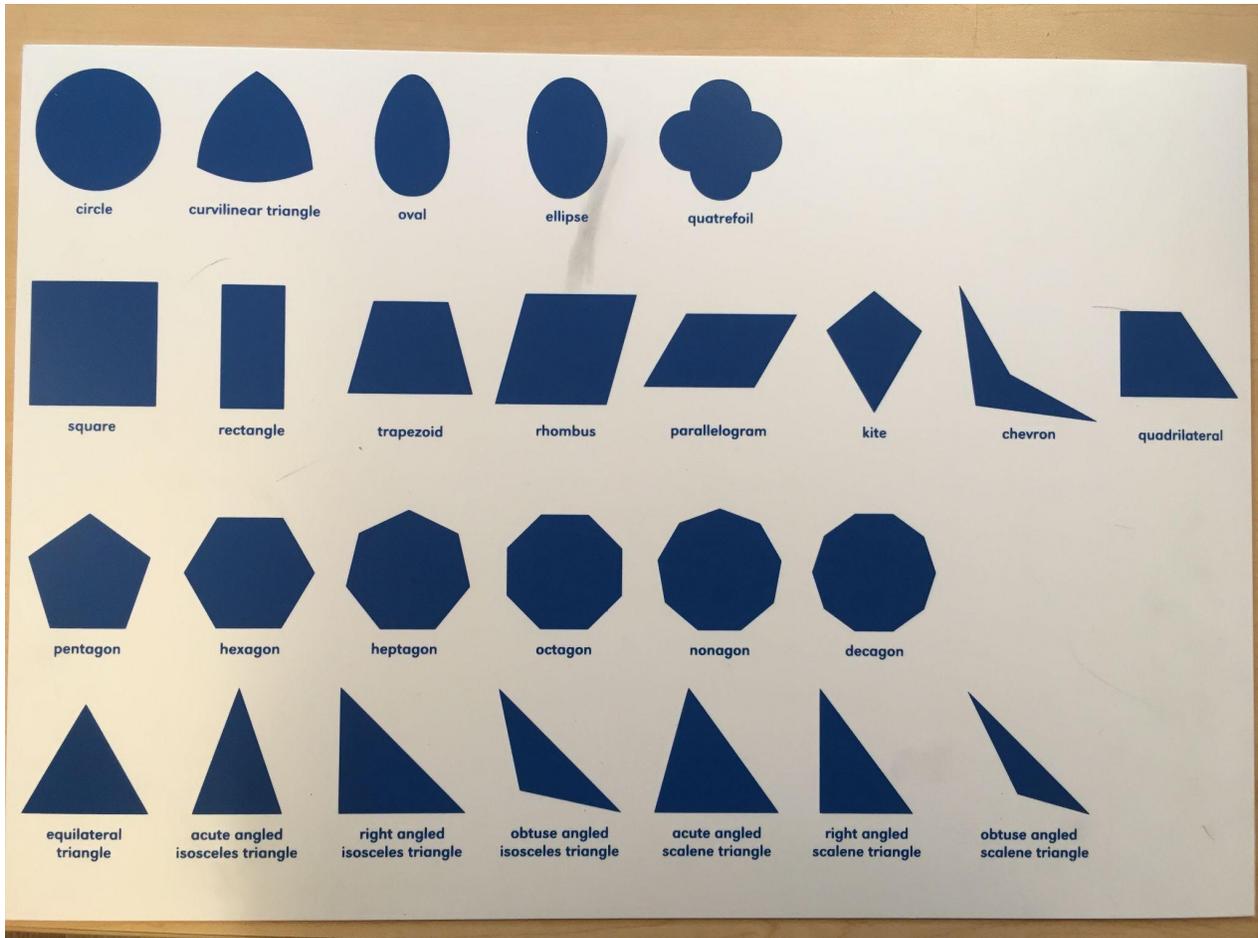
Square flat piece of wood
25 small head nails; approx. 1.5 inches in length
Hammer
Ruler
Pencil

Instructions to build your own geometry nail board:

- Use a ruler and pencil to measure and mark an equal distance of 5 points across and 5 points down on the piece of wood. It will be a 5 by 5 square.
- Hammer in the nails, using the 25 pencil points as your guide. Leave $\frac{1}{2}$ an inch remaining up, which will be used to secure the rubber band.

Making Geometric Shapes using the Nail Board

Using this geometric shape chart...



...make the following shapes, using the nail board and a rubber band.

Activity 1



Activity 2



Activity 3

