

Name(s) _____ Period _____ Date _____

Activity Guide: Circle-Triangle-Square

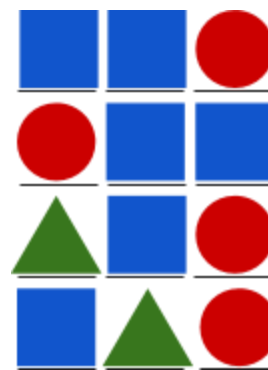


Instructions

Given 3 places to work with, make as many *unique* patterns as you can using only circles, triangles and squares.

The diagram on the right shows a few examples of some 3-place patterns.

NOTE: Order matters, so, for example: Circle-Triangle-Square is a different pattern than Square-Circle-Triangle, even though both have one of each shape.



Challenge 1 - Find all of the 3-place patterns

Record all of the unique 3-place patterns you can find in the template started below.

How many are there? Number each one you find to keep track. (Note there may be more or fewer total patterns than spaces provided)

Suggestion: *think about trying to find the patterns in an organized or systematic way, rather than just randomly.*

...

(keep going)

Challenge 2 - make a system for generating all the patterns

Now that you've listed out all of the 3-place patterns of circles, triangles, and squares, let's put them in a systematic order. You can use any system you like, as long as you create and follow a clear set of rules for getting from one line to the next.

Jot down the rules of your system below.

Suggestion: *to test your rules, have someone follow them to see if they can recreate your organized list above.*