

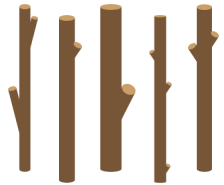


Stick at it

In this activity, you will be seeing which Roman numerals between 1 and 100 you can represent using only 5 sticks.

Maybe you can do this in your garden or on your daily or weekend walks?

First, collect a number of sticks of similar sizes. (Straight sticks will work better.)



You could use just 5 sticks

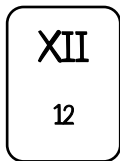
OR



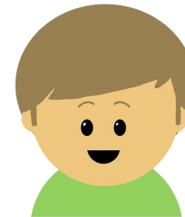
You could get a pile of sticks

Then, attempt to make the Roman numerals.

This example shows how you can make 12:

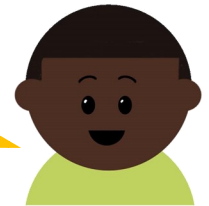


Let's do this!

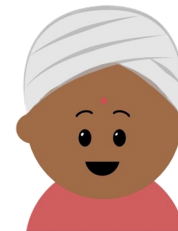


Can you explain how Roman numerals work?

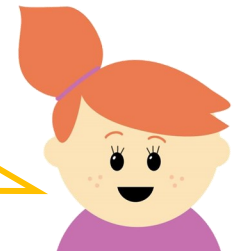
Can you see any patterns in the Roman numerals you can represent?



Are there any Roman numerals you cannot represent? Why?



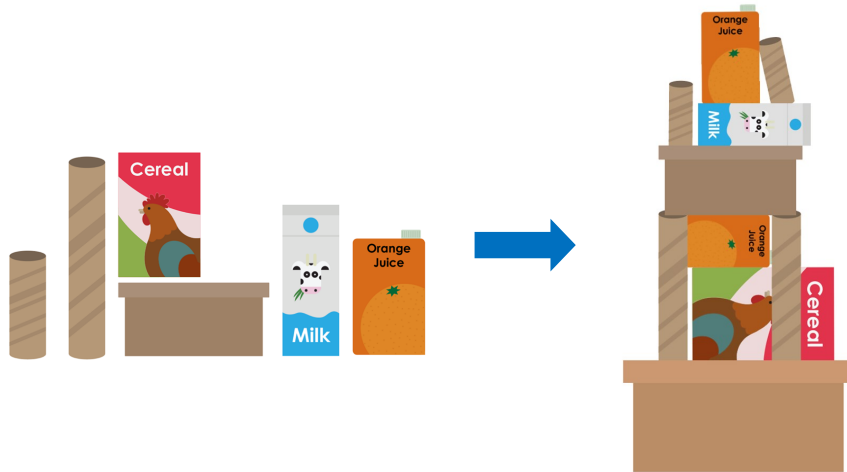
Explore how many Roman numerals you can represent with 1 more or 1 less stick.





Junk towers

With any recycling you have at your house, put it to good use by trying to make the tallest junk tower you can. You may need, scissors, tape, glue or string.



Whilst you complete the activity, time yourself!

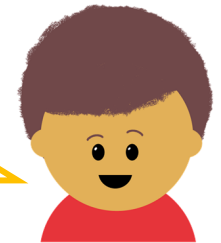


Let's do this!



Measure how tall your tower is in centimetres.
Can you convert it to metres or millimetres?

How long did the tower take you to build?
Can you convert the time to seconds or minutes?



Can you make more towers with different junk?
Compare their heights and times taken to make.



Challenge

Does a taller tower always mean a heavier tower?

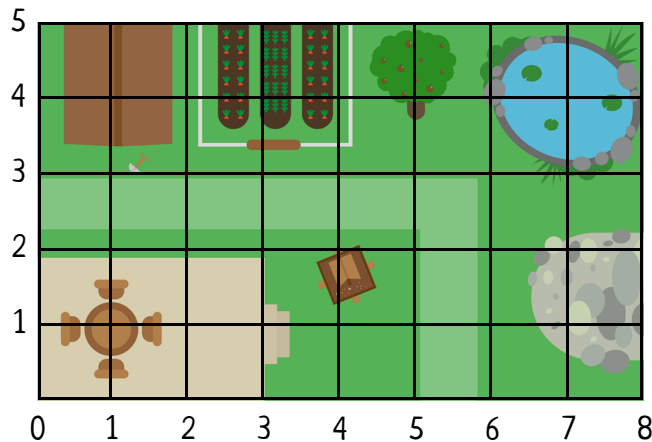




Coordinate mapper

On square paper, draw a birds eye view of your garden or a room in your home.
You should do this on square paper.

When you have finished, label the grid like a first quadrant.



Did you know, you can now give coordinates using your map?

For example...

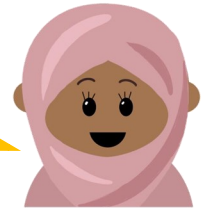
The patio table is located at (1 , 1) and the pond is located at (7 , 4)

Key questions



What order are coordinates given in?
Link your response to the axes.

What can be found at (__ , __) ?



What are the coordinates of the _____?



Which object on your map has the most possible coordinates? Why?

