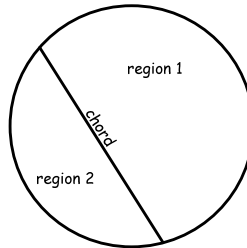


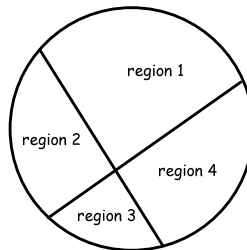
Regional Chords

Draw a circle with a radius of 6cm.

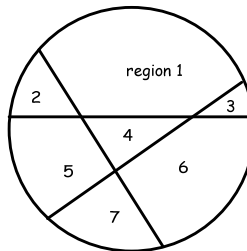
If one chord is drawn the circle is divided into two regions:



if another chord is drawn which crosses the first chord, there will be four regions:



If a third chord is drawn (make sure it cuts every other chord once, make sure that only two chords meet at an intersection), how many regions will there be?



Continue to add (carefully drawn) chords.
Look for a pattern in your results.

Learning and Teaching Objectives

- Decide on the information you need to describe and continue the pattern
- Describe a rule of a pattern or relationship in words or symbols
- Predict the next few terms in a sequence to test the rule

Regional Chords Solution

Number of chords	0	1	2	3	4
Number of regions	1	2	4	7	11

This problem works well in the context of pizzas.

An alternative problem is to allow three straight cuts (which do not have to intersect) and investigate the different number of regions it is possible to make (minimum /maximum)