

Cylindrical containers, like the tin cans used to package some food, can be made using two circles for the ends, and a rectangle which wraps round to form the body.

To make cylinders of varying sizes, the three pieces can be cut from a single rectangle of flat sheet in several ways.

For example:



Can you work out some possible dimensions of a rectangle and two circles which can be cut from a single sheet of A4 paper and put together to make a cylinder?

## Which dimensions allow you to make a cylinder with the greatest volume?

You can assume that the dimensions of an A4 sheet of paper are 21cm and 29.6cm