

Cutting a Cube

Level B

A cube is like a box. You might think of it as a special type of cardboard box. We could cut up a cardboard box and make it into one large, flat piece of cardboard. We often do that when we want to recycle the cardboard. The easiest way to cut a cardboard box is to cut along the lines (edges). How many cuts does it take to make the box into one flat piece? In other words, what is the least number of lines (edges) that need to be cut so that the cardboard is in one flat piece? Remember all the sides of the cardboard must remain attached in one single flat piece. What is the least number of cuts that need to be made? Explain how you determined your answer.

Why do you think your answer is correct?

Write a note to a friend to convince your friend that your solution will always work for every cube.

