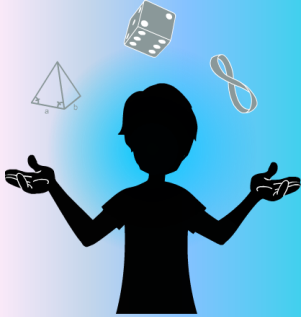


PUZZLING CARTOON

- BREAD SLICE -



AMAZINGMATHS

Materials:

- Video of the puzzle
- Sheets of paper
- Pencils

The puzzle

Mr. Blaise challenges his students. He asks them to cut a loaf of bread into 8 pieces, with only three cuts of a knife. We suppose that Mr. Blaise's loaf of bread looks somewhat like this one.



Can you find out how to cut the loaf of bread with three cuts of a knife to obtain 8 pieces?



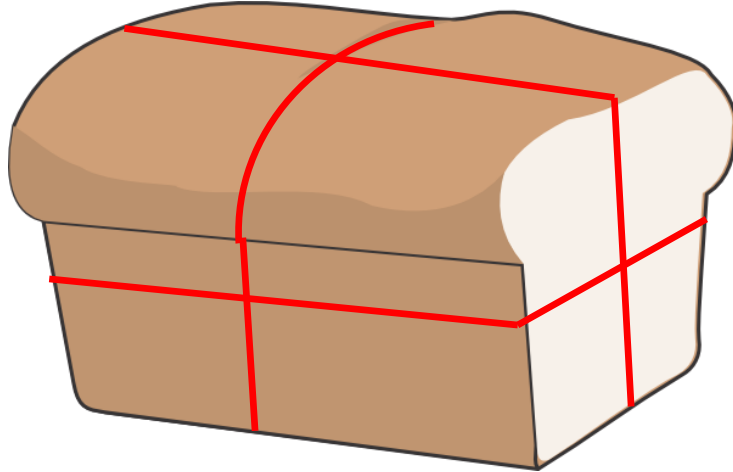
PUZZLE SOLUTION



The answer:

There are two possible methods to succeed:

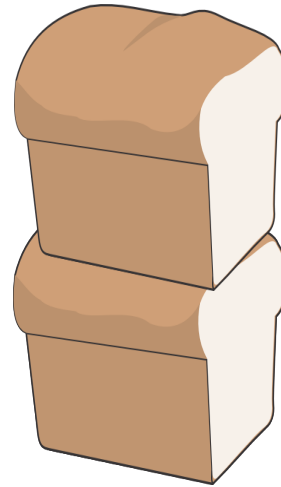
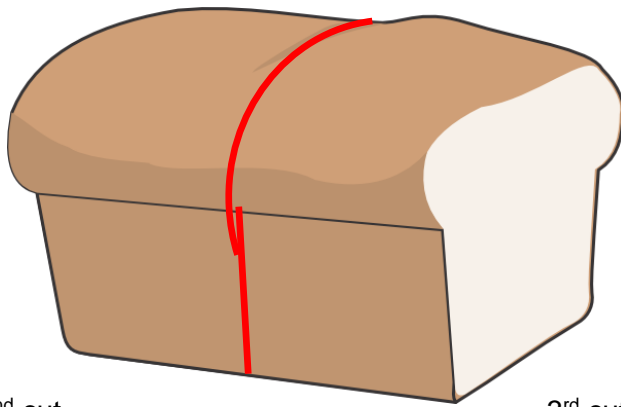
1st method: without moving the loaf of bread



2nd method: by moving the loaf of bread

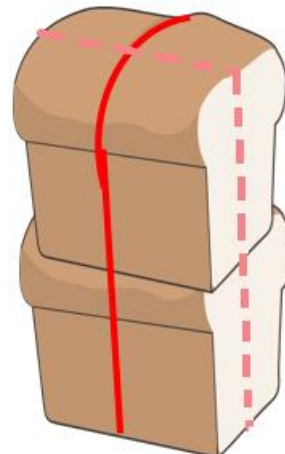
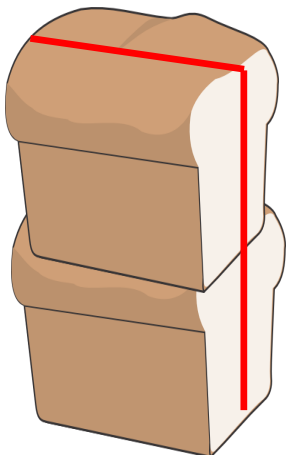
1st cut:

We place the two halves on top of each other



2nd cut

3rd cut



Solutions' process:

It is possible to find other ways to cut the loaf than the ones shown above. The guiding principle is that it is always possible to double the number of pieces that we had by cutting all the slices we already obtained. One way to do that would be to continuously pile up the pieces on top of each other.

If we had to make 16 pieces with 4 cuts of a knife, we would then have to move the pieces.