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Regulars



Puzzle page



Breaking up can be sweet...



I can't wait for Easter to get here, so I have bought myself a block of chocolate to tide me over. It is a normal rectangular–shaped block with 5 rows, and 4 pieces of chocolate to a row, making 20 pieces of chocolate ready for the eating. I want to eat all of it right now, but I want to savour each piece.

What is the least number of clean snaps necessary to break the block of chocolate into the 20 individual pieces?

What about for a block with n rows of m pieces?

The solution

The solution to this puzzle is really pretty simple – but, as usual with maths, only if you think about it the right way!

Each snap creates exactly one extra piece, therefore to break a bar with K squares of chocolate into all its constituent pieces will require $K-1$ snaps. So if the block has n rows of m pieces, it will take $nm-1$ breaks.

And that's all there is to it!

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