






Easter egg painting machine



Ben is a famous engineer who has built a machine called **M** for repainting Easter eggs. If an egg of a particular pattern is put into a machine, it recognises that pattern and repaints the entire egg with a new pattern. Below is a description of how **M** repaints eggs.

$M(\text{white}) = \text{yellow dotted}$	$M(\text{red diamonds}) = \text{orange stripes}$
$M(\text{yellow dotted}) = \text{blue stripes}$	$M(\text{orange stripes}) = \text{white}$
$M(\text{purple grid}) = \text{red diamonds}$	$M(\text{blue stripes}) = \text{purple grid}$

Eggs can be repainted several times, for example starting with a plain egg , a first painting gives a dotted yellow egg , and a second repainting turns the yellow dotted egg into a striped blue egg . This double painting can be presented by this formula:

$$M(M(\text{white})) = M(\text{yellow dotted}) = \text{blue stripes}$$

QUESTION

Ben's loyal fan Elena sent this instruction for painting. Which pattern egg will they get?

$$M(M(M(M(M(\text{purple grid}))))))$$

A



B



C



D

