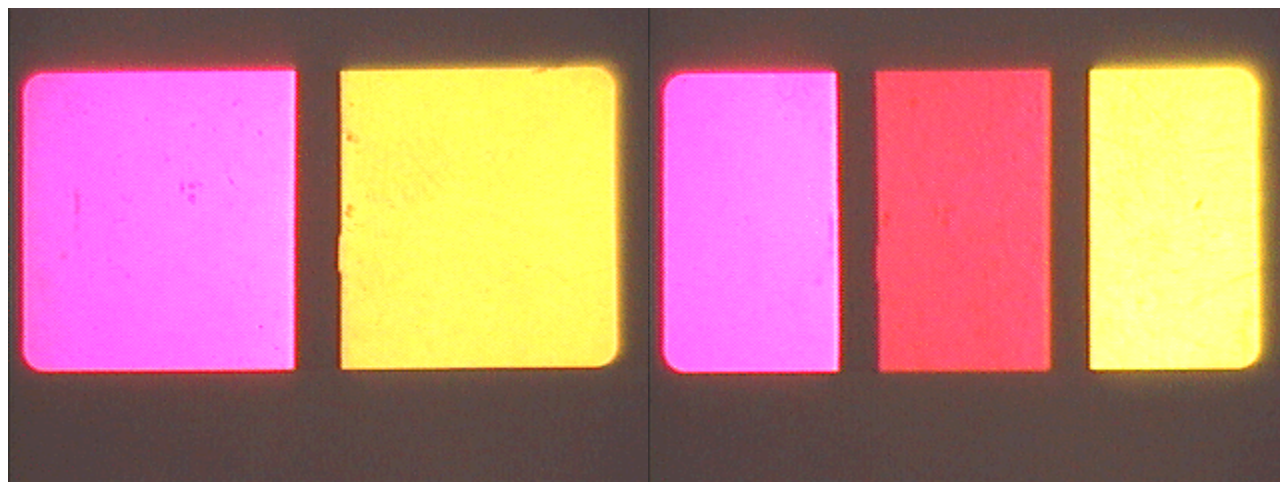


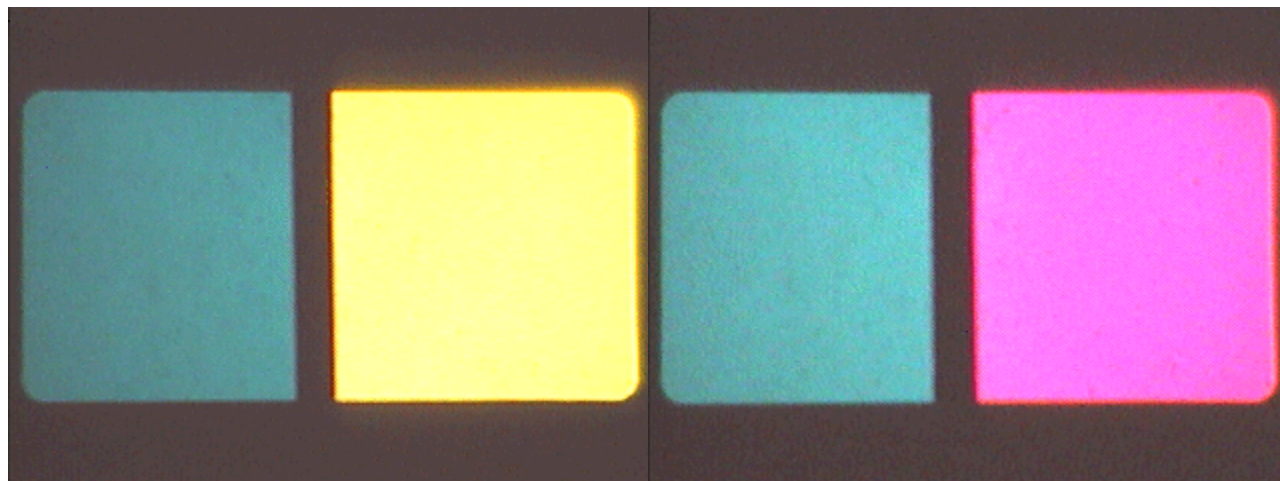
Answer #194

The answer is (c): the region of overlap is red, as seen in the photograph at the right below.



Note from [Question #193](#) that a magenta filter (at left) removes the green and a yellow filter (right) removes the blue. Therefore the remaining light must be red. Another way of viewing this is that both yellow and magenta light includes the color red.

Below are two other pairs of negative color filters set up as done here: cyan and yellow at the left, and cyan and magenta at the right. (The cyan actually looks more cyan than in the pictures!)



What will be the color at the center when these two pairs of filters are overlapped? Click [here](#) when you have reached your conclusion and would like to check your answer.

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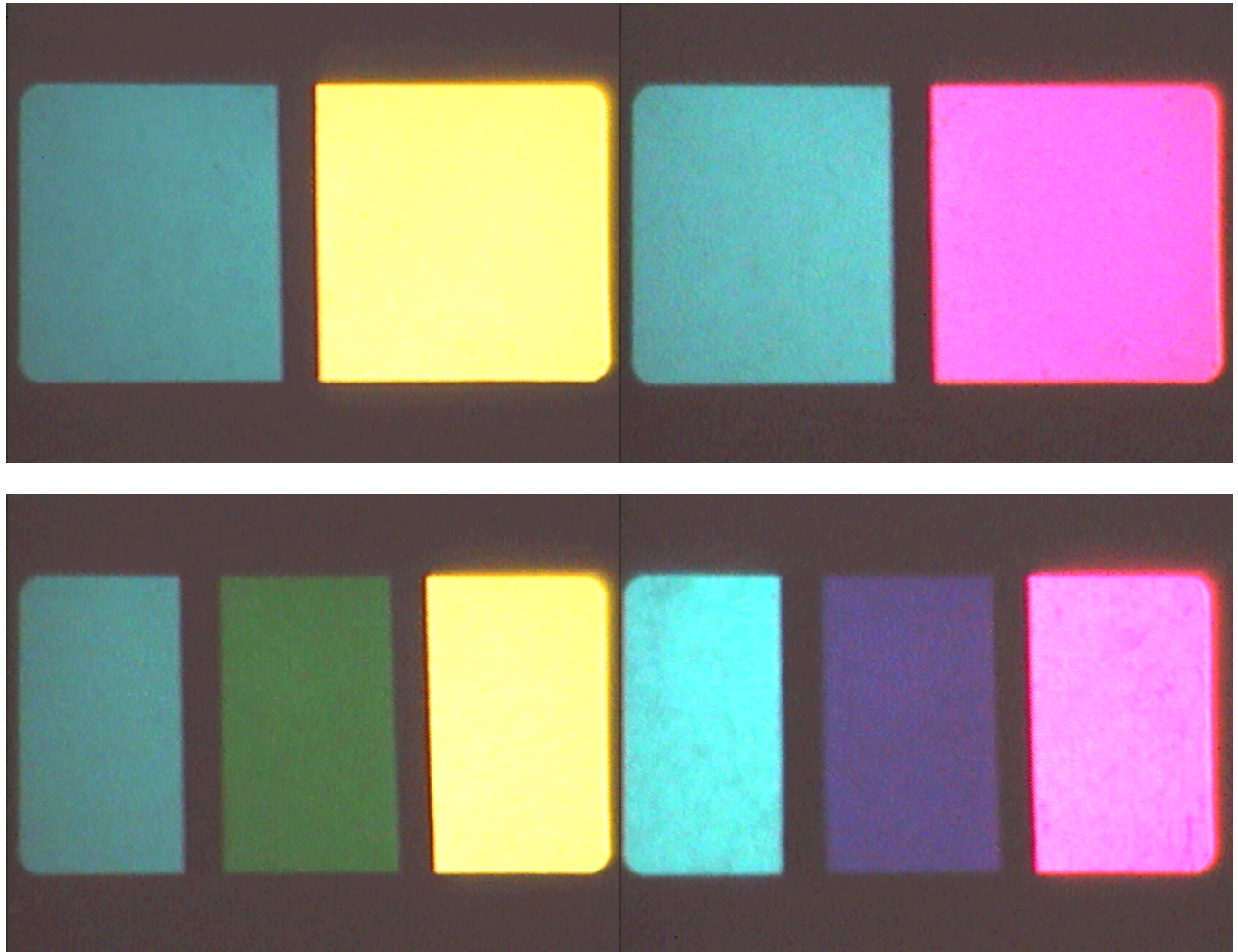
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For questions and comments regarding the *Question of the Week* contact [Dr. Richard E. Berg](#) by e-mail or using phone number or regular mail address given on the [Lecture-Demonstration Home Page](#).

Here are the two original filters and the combination of the filters in series immediately below each.



In each case the filter removes the complementary color to the color of the light passing through the filter, so two series filters remove two of the three primary colors for lights, leaving only the third primary color, as can be seen in the pictures.