

Colour Blindness

10 marks

- a. (3 marks) How well do each of these palettes work for those unable to see colour at all? Why?

For those who are monochromacy, there's no difference between these two palettes as they can't see any colours in it. All colours on two palettes change to greyish colour. This is because their eyes can't detect RGB lights from the object.

- b. (3 marks) Which oppositional colour pair seems best over all – yellow-blue or green-red? Explain your answer.

The first pair seems best over all because for all kinds of colour blindness except monochromacy, we are able to see that colours vary from left to the right. This is because that the first one has only one primary colour in RGB, but two in the second one.

- c. (4 marks) Given what we discussed in class about the photo-receptors in the human retina, what characteristic of the photo-receptors might explain your choice in part (b)?

Photo-receptors can react to different wavelengths of light. Since the wavelength of green and red are both relatively long, both colours are similar. Therefore, people who are colour-blinded can't distinguish colours in that range. However, for the first palette, colours vary from short wavelength to long wavelength. There are wide range of colours in between. Therefore, people are able to recognize some colours.