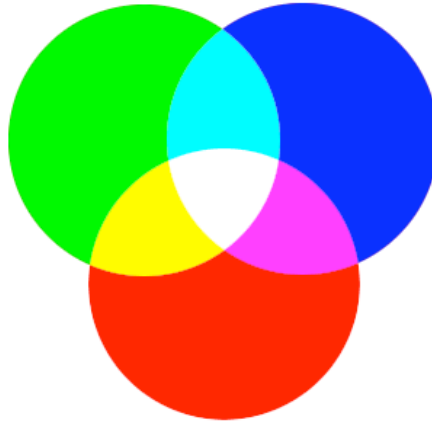


Name: _____

Colour Assignment

1. Draw and label an **additive** colour diagram for light (3 different coloured circles).



- a) List the primary colours.

Red, Blue, Green

- b) How are secondary colours made? List them.

Secondary colours are made from two primary colours mixed together

Red + Blue = Magenta; Red + Green = Yellow; Blue + Green = Cyan

- c) What are complimentary colours? List the 3 sets of complimentary colours from the diagram.

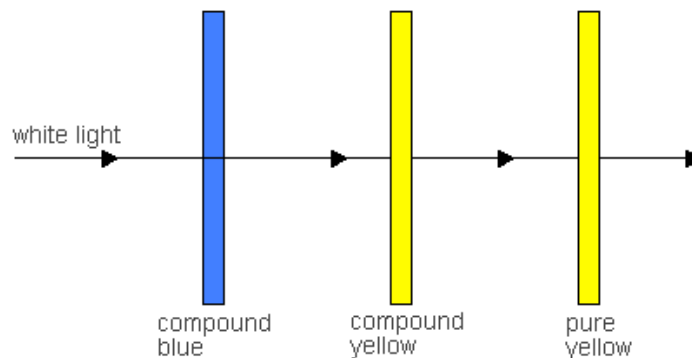
Complimentary colours are colours that combine to create white light. They are a primary and secondary colour. Red + Cyan; Blue + Yellow; Green + Magenta

2. In the diagram below, what colours emerge from:

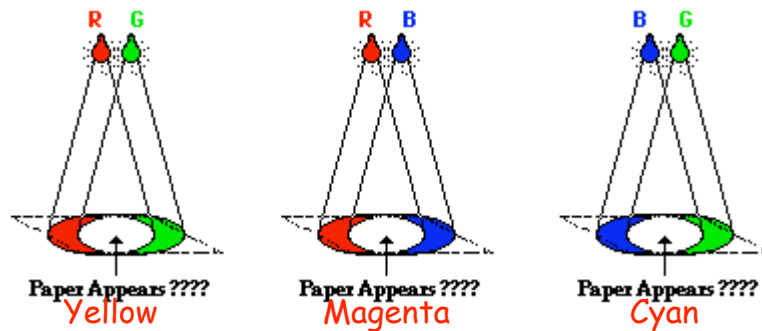
- a) compound blue filter - Green, Blue, Violet

- b) compound yellow filter - Green

- c) pure yellow filter - None



3. Two lights are arranged above a white paper. When the lights are on they illuminate the entire paper (as seen below). Each light bulb emits a primary colour of light - red (R), green (G), and blue (B). What colour will appear on each paper below?



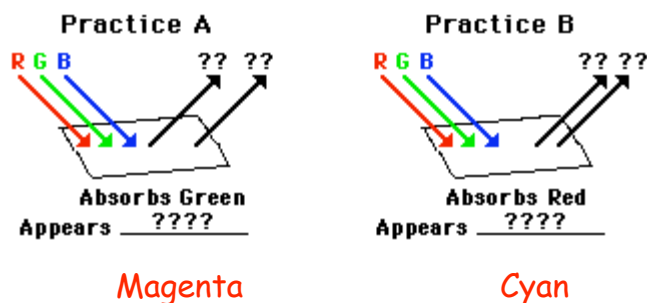
4. If magenta light and yellow light are added together, will white light be produced? Explain

No, they are not complimentary colours.

5. Explain why a red shirt looks red when visible light (white light) shines upon it.

Red shirt looks red because it absorbs the blue and green wavelengths and reflects the red wavelengths

6. Complete the following two diagrams. White light shines on a sheet of paper which is painted with a pigment which absorbs one of the primary colours of light. For each diagram, determine the colour of the two reflected rays and determine the colour which the paper appears.

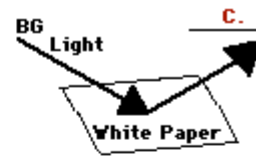
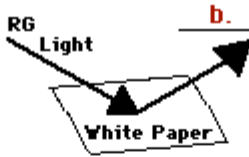
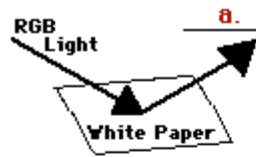


7. In the diagrams below, several sheets of paper are illuminated by different primary colours of light (R for red, B for blue, and G for green). Indicate what primary colours of light will be reflected and the appearance of the sheet of paper. (Note the similarity between this problem and the above problem.)

a) White

b) Yellow

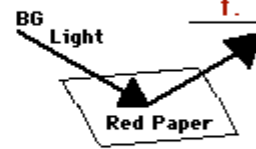
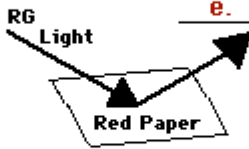
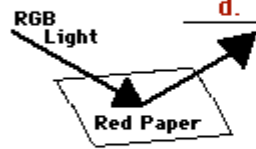
c) Cyan



d) Red

e) Red

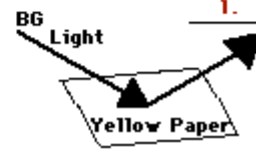
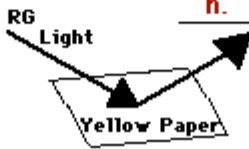
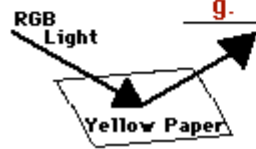
f) Black



g) Yellow

h) Yellow

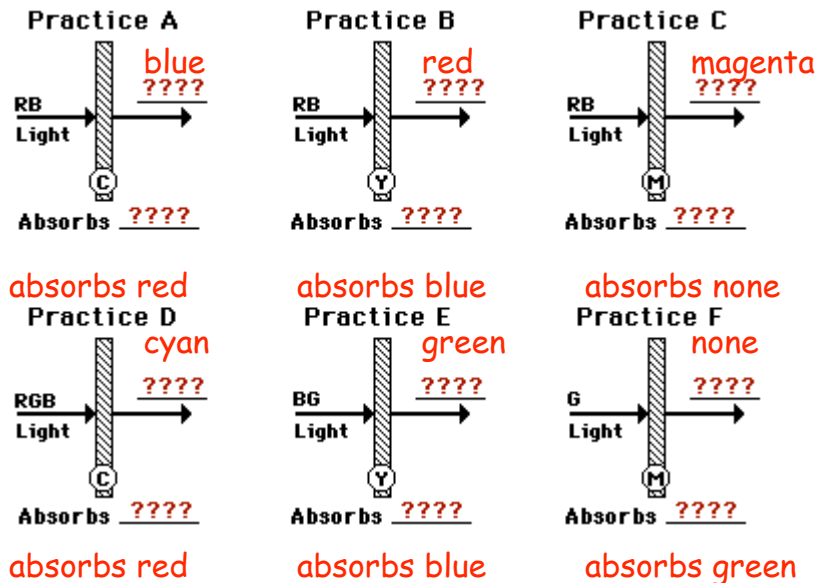
i) Green



8. Different colored light sources shine on different coloured sheets of paper. The indicated paper colour represents the appearance of the paper when viewed in white light. Fill in the table below to show the colour of light which reflects from the paper (i.e., the colour observed).

	Colour of Light	Colour of Paper	Colour Observed
a.	Red	Yellow	Red
b.	Red	Magenta	Red
c.	Blue	Blue	Blue
d.	Blue	Cyan	Blue
e.	Blue	Red	no reflection
f.	Yellow	Red	Red
g.	Yellow	Blue	no reflection

9. The following diagrams depict various primary colours of light (R for red, B for blue, and G for green) incident upon a coloured filter (C for cyan, M for magenta, and Y for yellow). Determine which primary colours of light will pass through the filters.



13. What primary paint colours (CMY) or combination of paint colours would you use to paint the boy below? He has pink (magenta) skin, blue jeans, a yellow sweater, a black baseball cap, red sneakers and aqua-coloured socks. Indicate the **primary colours of paint** to be used on the diagram below.



Skin: magenta
 Jeans: magenta and cyan
 Sweater: yellow
 Cap: magenta, yellow, and cyan
 Sneakers: magenta and yellow
 Socks: cyan