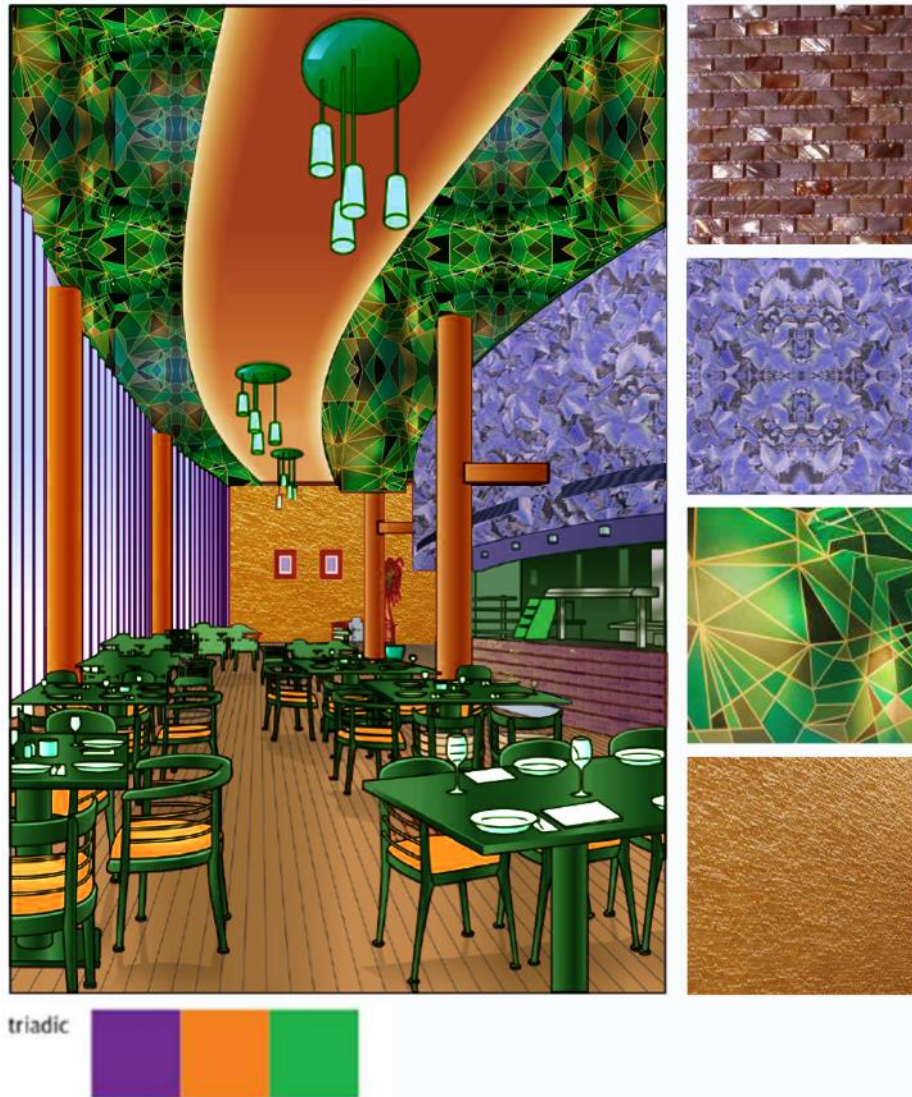


# Interior Design 107

## Color Theory and Design

### Course Portfolio



Fall 2020  
Los Angeles Mission College

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# Exercise 1

## Flags of Countries and their Meanings

Name: Edward Locke Due Date: December 14, 2020



### The Kingdom of Cambodia

Source: <https://www.vietvisiontravel.com/post/cambodia-national-flag-history-meaning/>

#### Color meanings:

- **Red:** the bravery of Cambodians which is clearly revealed through wartime. This color also represents the nation of Cambodia.
- **Blue:** the sense of liberty, cooperation, and brotherhood of the whole nation. It is also the symbol of the country's monarchy and the King.
- **White of Angkor Wat:** The religion and beliefs of the country – Buddhism, and the virtue of purity which relates to the structure of the universe. The Angkor Wat is the symbol of the integrity, justice, and heritage of Cambodia. It is also a great spiritual and cultural role among people in this country.

# Exercise 2

## Chroma

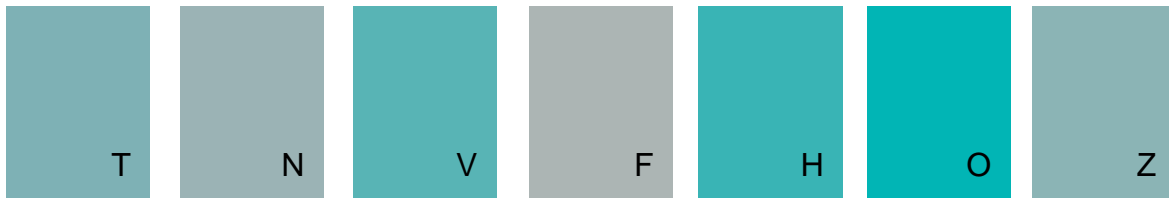
Name: Edward Locke Due Date: December 7, 2020

Test your ability to distinguish the chromas of colors.

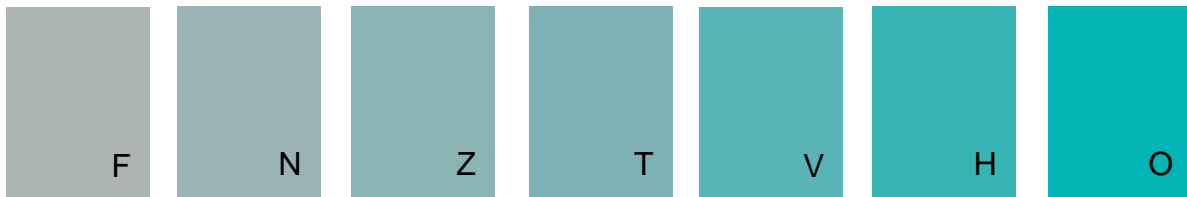
Below are seven colors of the same *hue* and *value*, but different *chromas*. Select and drag the colors into a horizontal chroma sequence or row, with the color of lowest chroma on the far left and the one with the highest chroma on the far right, like the chroma sequences in the Munsell color tree from Figure 2.15 in the text. Each color is labeled with a letter to enable you to check your solution. The letters do not designate the chroma of the color.

Save this file as a Word document or PDF file named *Exercise 2\_Chroma\_XX*, where XX denotes your initials and upload it to Canvas or e-mail it to the instructor.

### Given Arrangement in Chroma



### Rearranged Chroma Sequence: Lowest Chroma → Highest Chroma



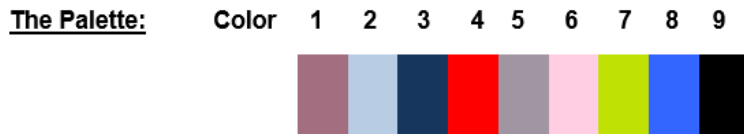
**Note:** The F, N, Z, T color swatches can be easily compared; the V, H, O color swatches are more difficult to compare.

# Exercise 3

## Simultaneous Contrast

Name: Edward Locke Due Date: December 7, 2020

**Instruction:** Colors change when surrounded by or touching other colors. Test your understanding of the perceptual effect called *Simultaneous Contrast* by making one color look like six colors. Below is a palette of colors and below that are three sets of two large rectangles. Find the **one** color from the palette that changes the **most** when surrounded by the colors of the six large rectangles. To do so, select a color from the palette that you think will change the most and drag and drop it into the center of the blue rectangle. Continue to drag and drop the *same* color into each of the six rectangles. View from a distance or squint your eyes. Does the color now *clearly* look like six different colors? If not, return those colors to the palette and try another color. For comparison, save each of your experiments as a unique document, open all of them, reduce the viewing size of each document so that you can view all of them on one screen, and determine which color changes the most.



**The Rectangle Swatches:**



Change in hue

Change in value

Change in chroma

### **The outcomes of the experiment:**

- (1) The Color No. 4 (Red) from the palette changes the most when surrounded by the colors of the six large rectangles, notably in the change in value (*Figure 1A*).
- (2) The color that clearly look like one of the six different colors is Color No. 5, a tone of Violet Red (*Figure 1B*)

### **Procedure for reaching the conclusions:**

- (1) The initial observation is made by viewing from a distance or squinted eyes at all samples placed side-by-side. As shown in *Figure 2A*, from all 9 samples, Colors No. 3, 5 and 9 are close to neutral gray and black and undergo almost no change. This observation can be confirmed by the grayscale image of the screenshot (*Figure 2B*). Thus, they have been excluded. Neutral colors produce the least changes here.
- (2) The comparison of the remaining 6 samples (Colors No. 1, 2, 4, 6, 7, and 8) leads to the conclusion that Colors No 4 (Red) and 8 (Blue) appear to show greater changes than others, notably in the change in value (*Figure 3*). Therefore, Colors No. 1, 2, 6, and 7 have been excluded. Duller or pastel colors produce little changes; and brighter colors produce the greater changes here.
- (3) The final comparison between Colors No. 4 (Red) and 8 (Blue) leads to the conclusion that Color No 4 (Red) from the palette changes the most when surrounded by the colors of the six large rectangles, notably in change in value (*Figure 4A*). This can be confirmed by looking at the grayscale image of both colors (*Figure 4B*). Red is lighter than blue and produces greatest change in this experiment.

### **The Palette:**



*Figure 1A. The Colors No. 4 and 5.*

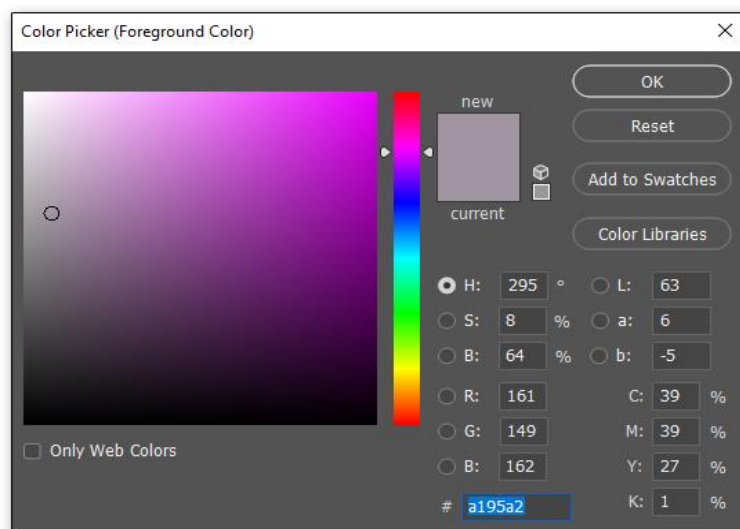


Figure 1B. Color No. 5, a tone of Violet Red, has the same hue, value and chroma as one of the six different colors.

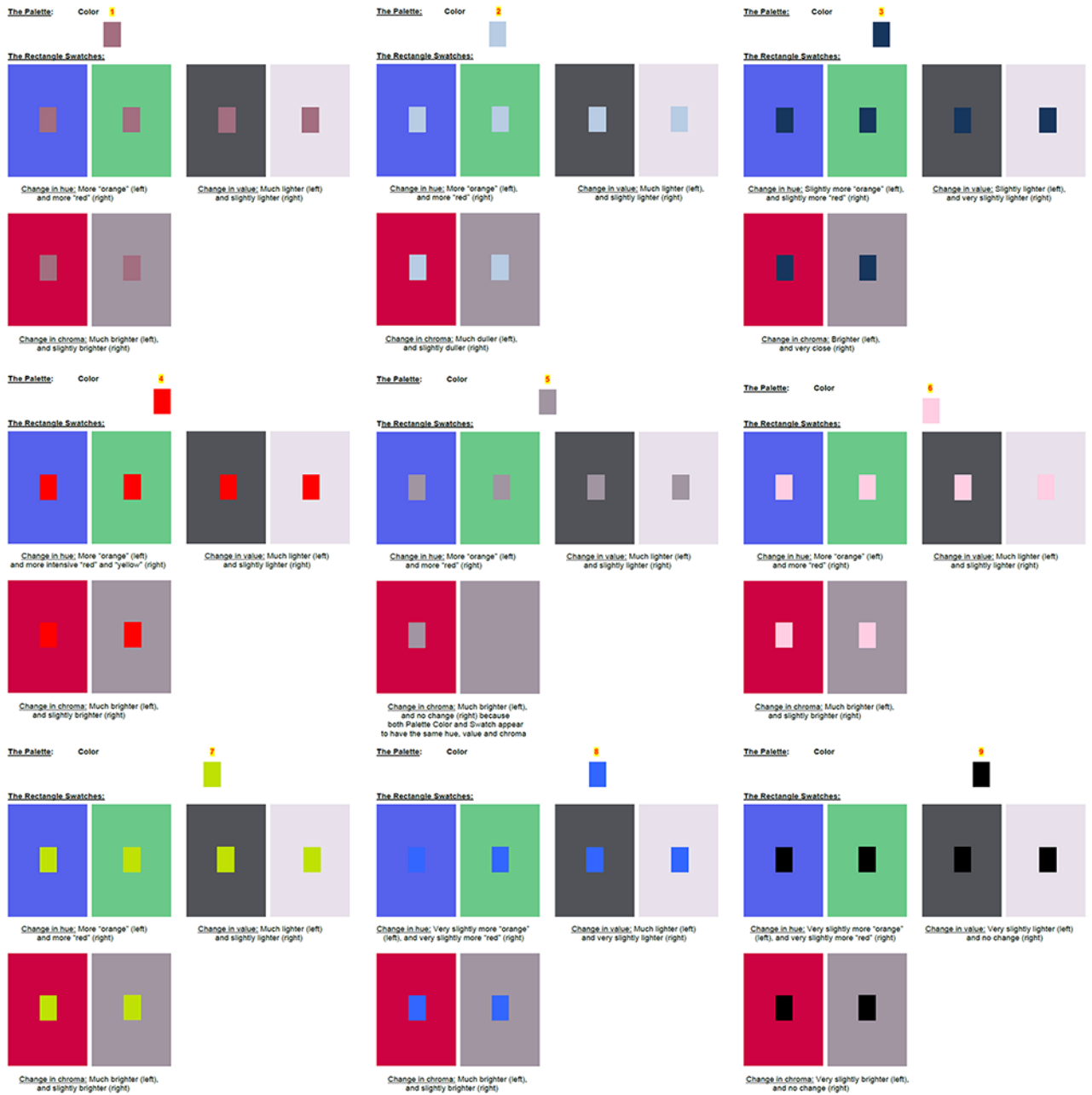


Figure 2A. All 9 samples in the experiment.

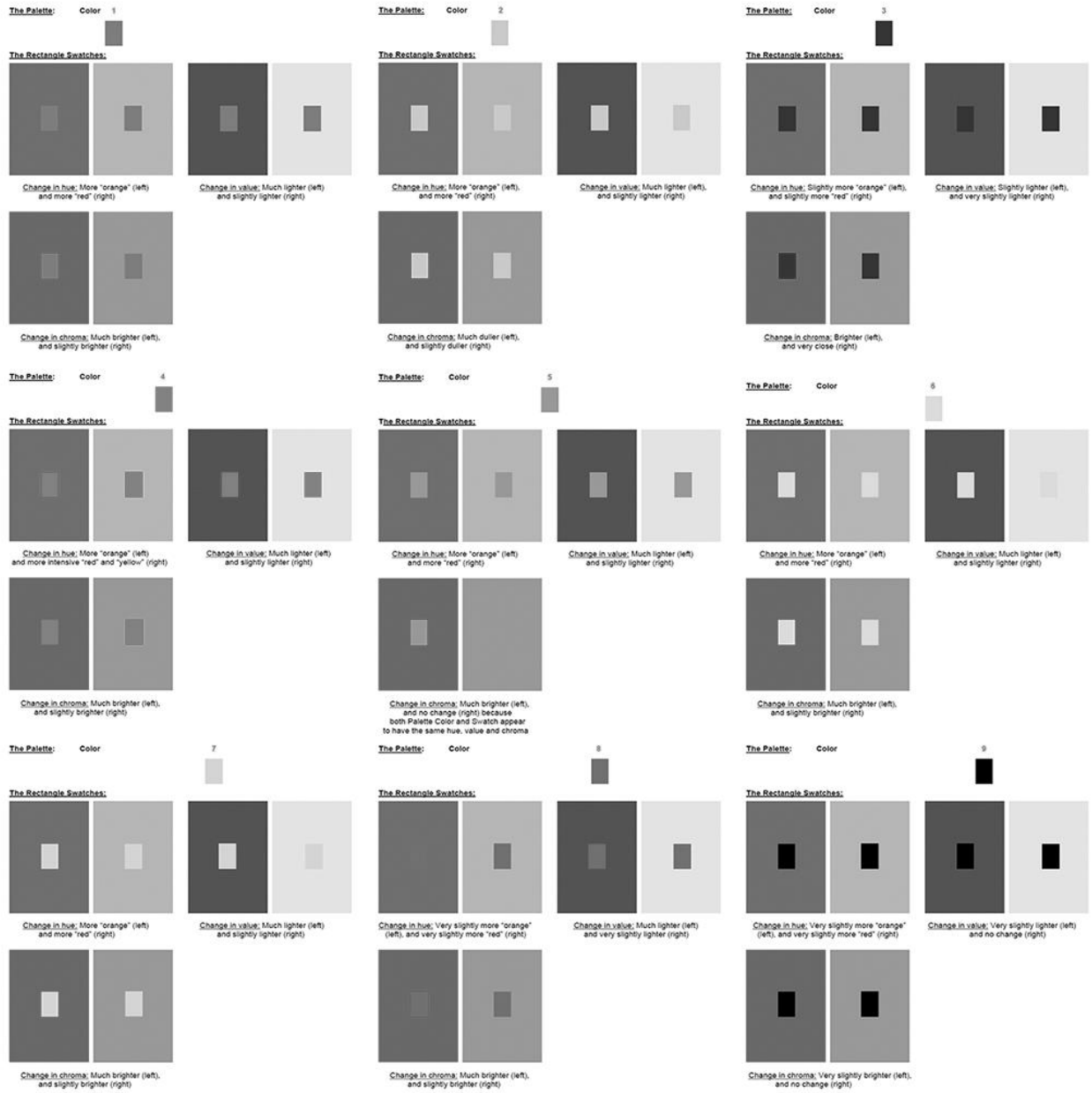


Figure 2B. Grayscale image of all 9 samples in the experiment.

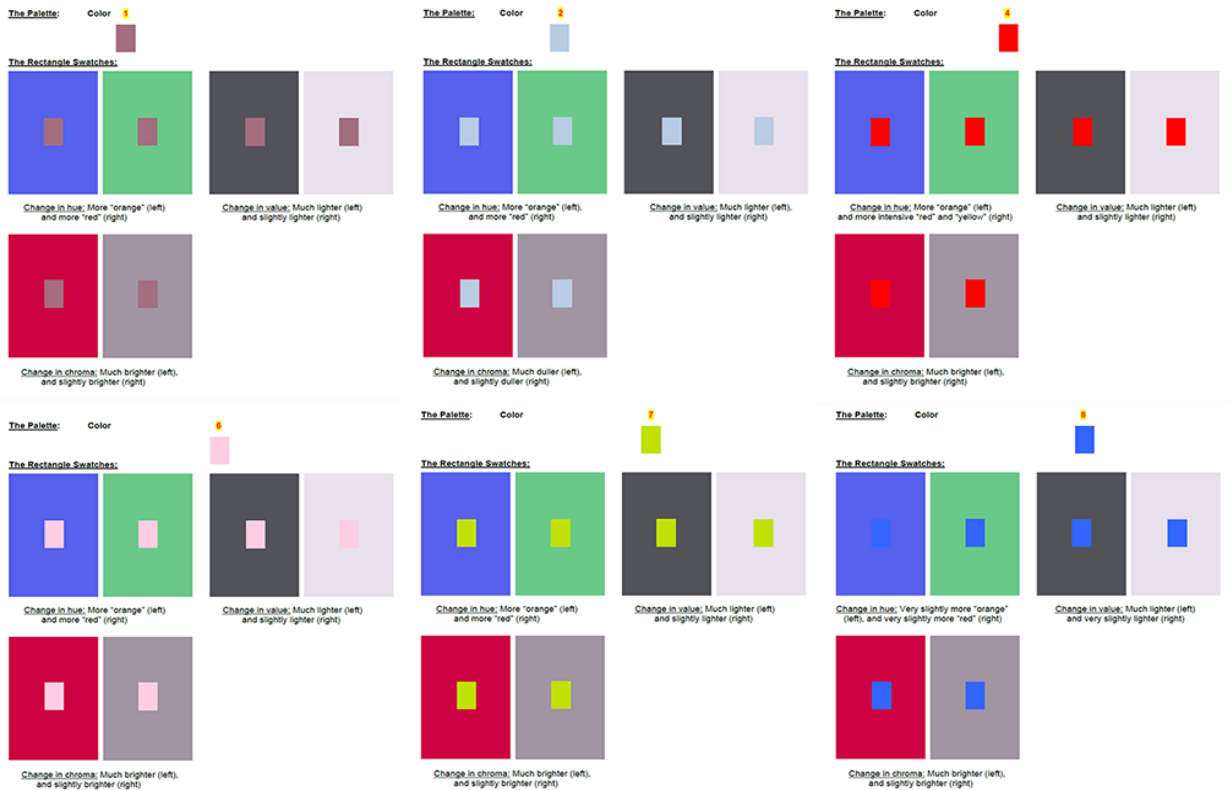


Figure 3. The comparison of the remaining 6 samples (Colors No. 1, 2, 4, 6, 7, and 8).

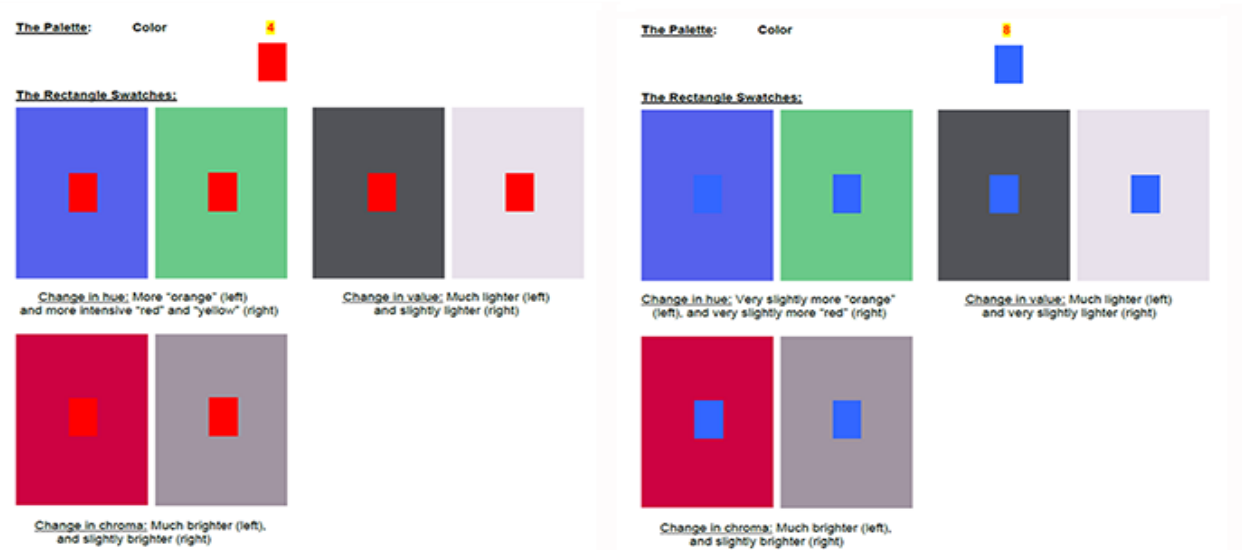


Figure 4A. The final comparison between Colors No. 4 (Red) and 8 (Blue).



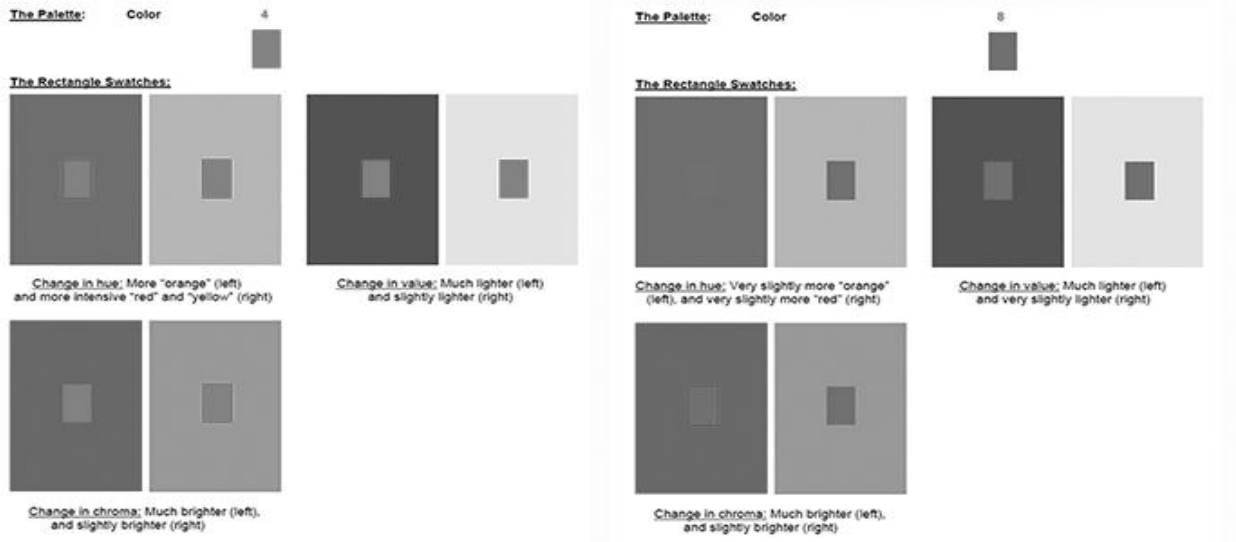


Figure 4B. The Colors No. 4 (Red) and 8 (Blue) compared in grayscale image.

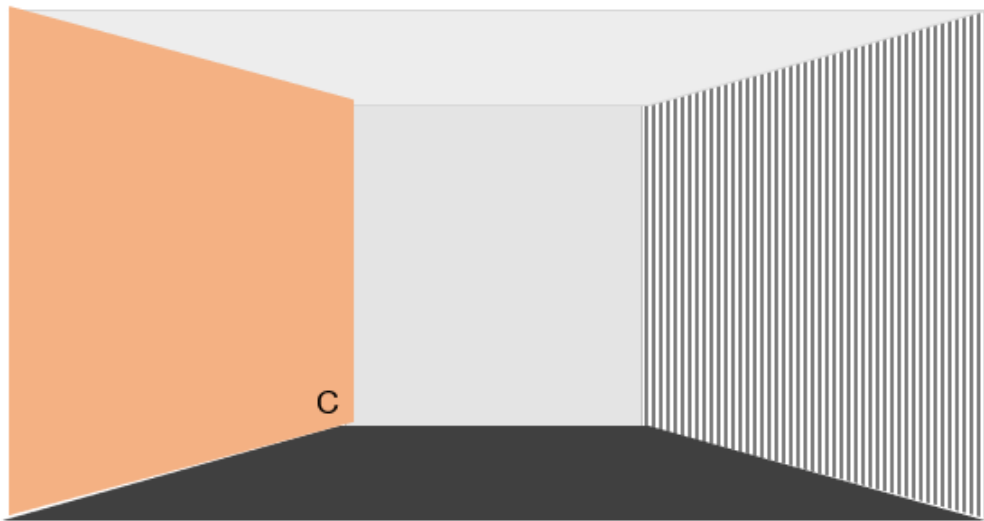
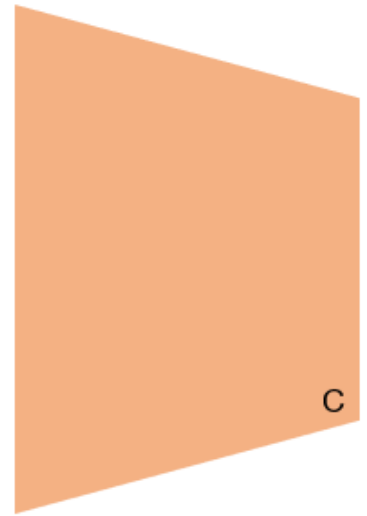
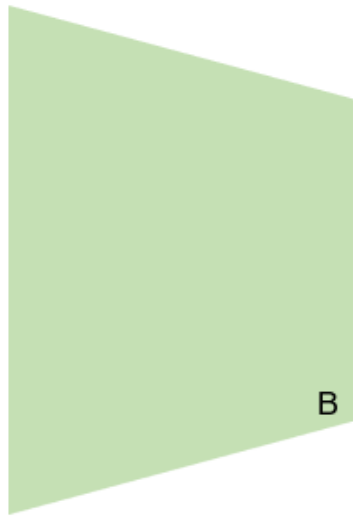
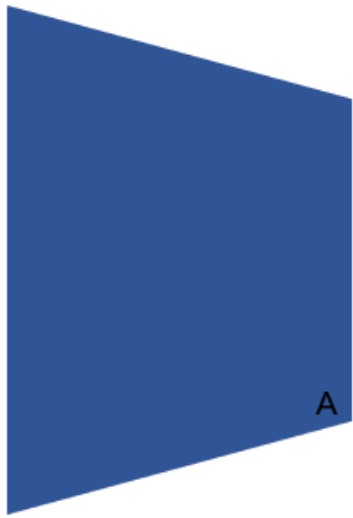
# Exercise 4

## Color Balance

**Name:** Edward Locke **Due Date:** December 7, 2020

Below is a perspective view of an interior space with the left wall missing. There are three value options provided that have the potential to balance with the patterned wall on the right and the overall visual weight of the space. Select the one option that best provides symmetry to the interior space. Click on the selection and drag and drop it into place.

Analysis: “Intense colors should always be balanced with dull color or neutral white, black, or gray to avoid eye strain from constant shifts in values. (Slide 31 of Chapter 4 pdf presentation)”. C (light orange) is a relatively intense warmer color while the rest are cooler neutral white, gray and black with larger area; thus, the small intense color area (left wall) balances larger duller color area (right patterned wall, floor and ceiling).



# Exercise 5

## Types of Color Rhythm

Name: Edward Locke Due Date: December 7, 2020

Below are examples that illustrate different types of rhythm that can be created and emphasized with color. Below are five descriptions that coincide with each illustration. Click and place each description next to its correct illustration.

Color alternation

Color continuity

Progression of size and value

Value progression

Repetition



# Exercise 6

## Emphasis through contrast of hue and value

Name: Edward Locke Due Date: December 7, 2020

**Instruction:** Test your understanding of how color intensity can create focal points or remove focus. Below is a palette of colors, each of a different hue, value, and chroma. Below that is a large rectangle that serves as a background color for this exercise. Find the one color from the palette that produces the **least emphasis** and the one color from the palette that produces the **greatest emphasis**. To do so, select a color or two colors and drag and drop them on top of the background. Continue experimenting until you find the two colors that create the greatest focal point on the shape and the one that decreases the focus on the shape the most.

### **Outcome of Experiment and Analysis:**

1. The two colors that create the greatest focal point on the shape:
  - Color No. 1 (Yellow, with a smaller size, a lighter value and a brighter chroma, against the background color with a larger size, a duller chroma, and a darker value). The comparison of values of the Yellow swatch and the grayish brown background is tested by turning the colored screenshot into grayscale in Adobe Photoshop (*Figure 2*).
  - No. 6 (Red Violet, with a smaller size, a brighter chroma and a darker value, against the background color with a larger size, a duller chroma and a lighter value). The comparison of values of the Red Violet swatch and the grayish brown background is also tested by turning the colored screenshot into grayscale in Adobe Photoshop (*Figure 2*).
2. The one color that decreases the focus on the shape the most: No. 7 (a tone of Red-Red-Violet as tested in Adobe Photoshop with the Eyedropper Tool and the Color Picker Foreground Color window, with very close value as the background color, does not appear to have a focus on the shape (see attached *Figures 1 and 2*).

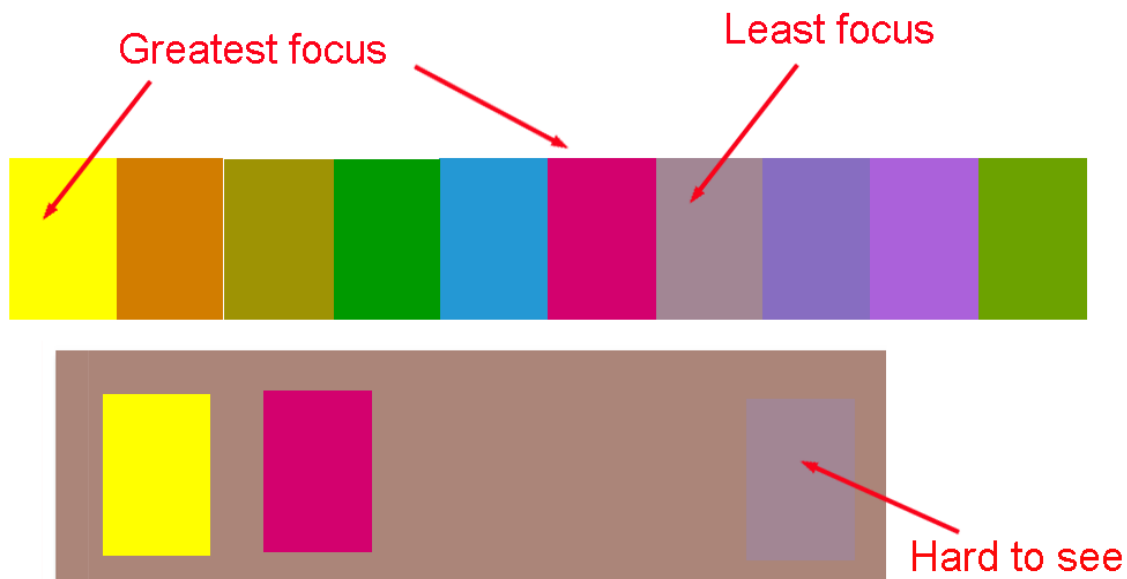


Figure 1. The conclusion.

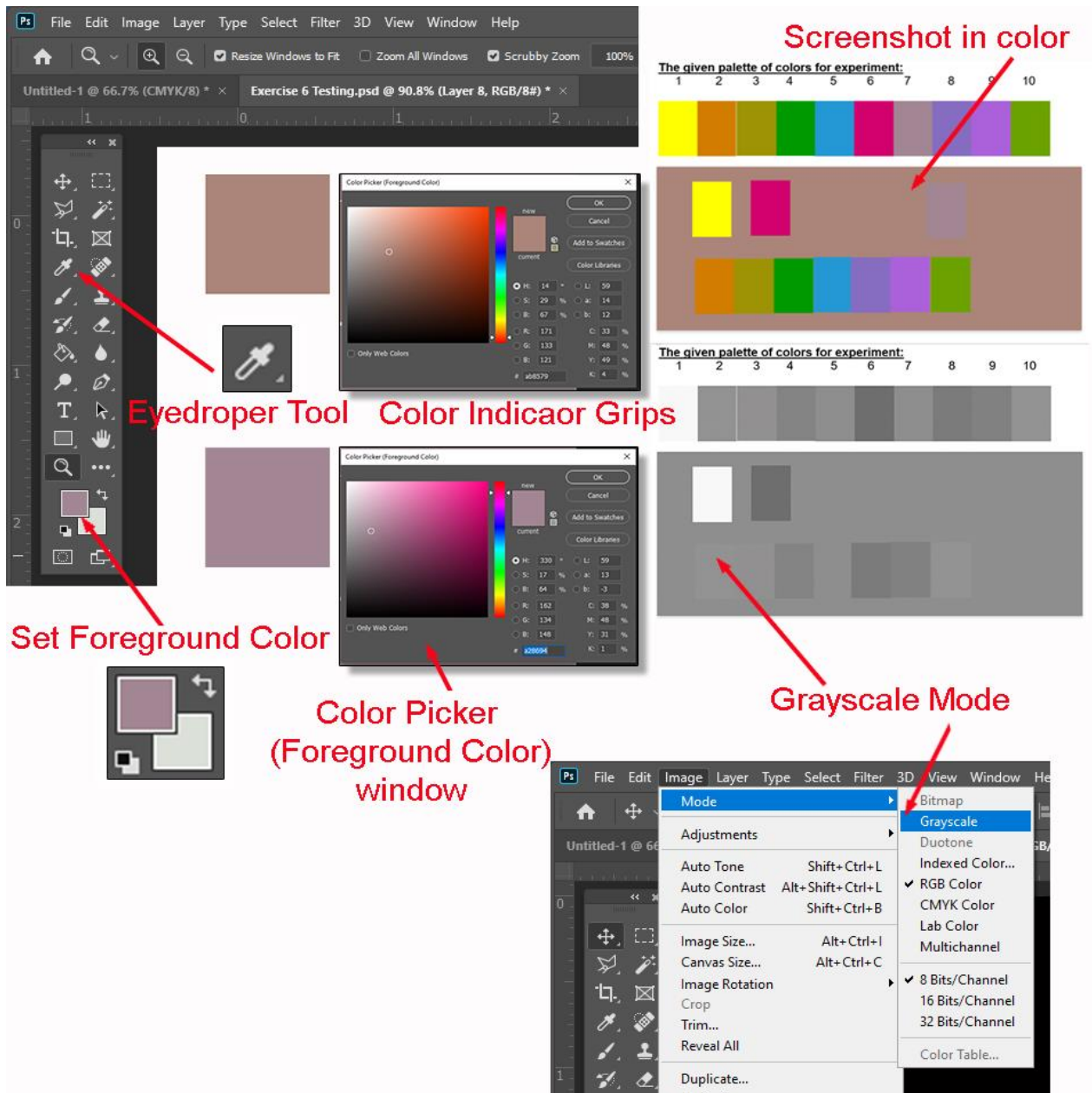
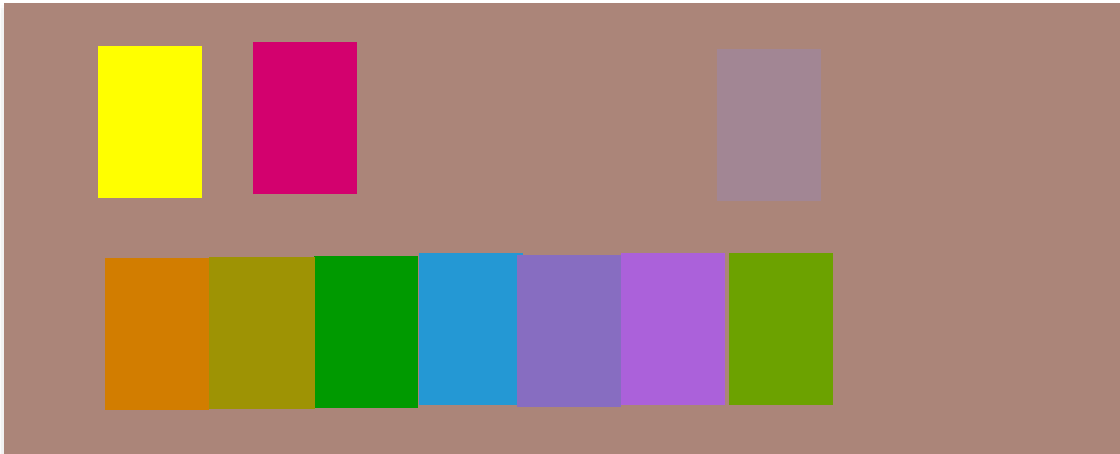


Figure 2. Photoshop tools used.

**The given palette of colors for experiment:**

1      2      3      4      5      6      7      8      9      10



# Exercise 7

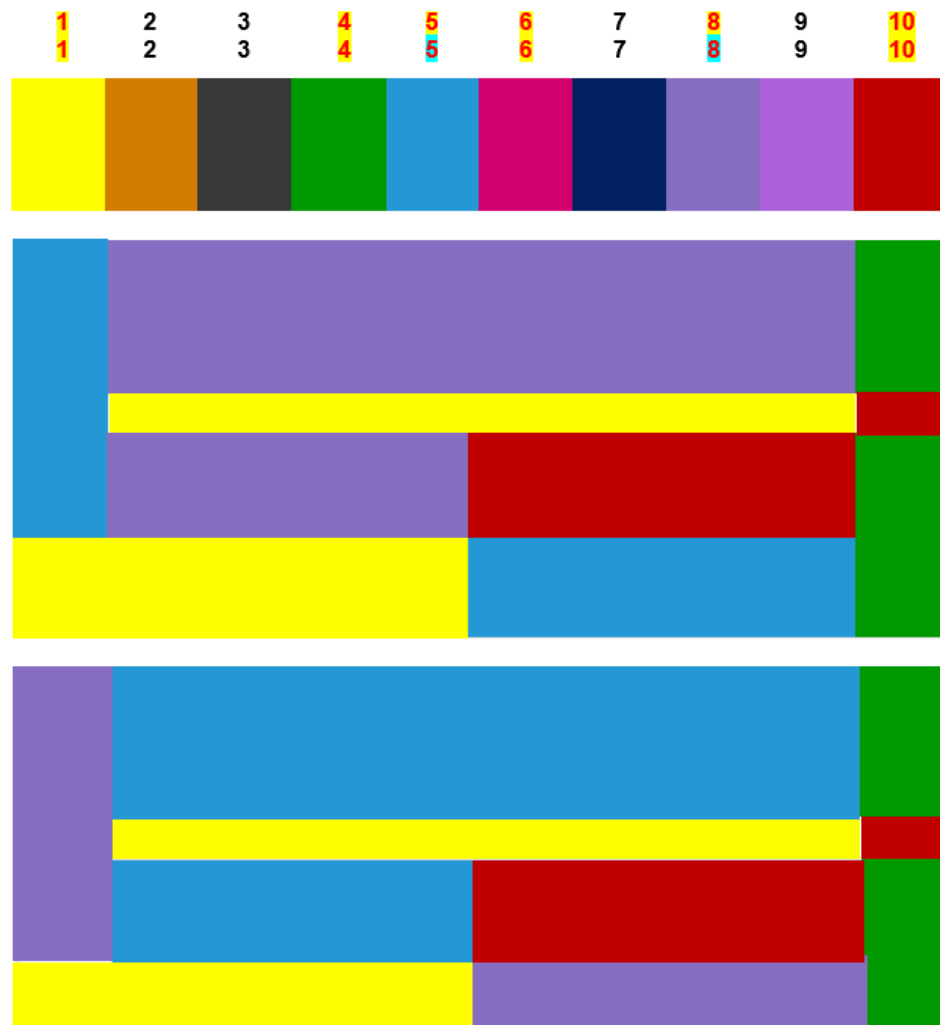
## Color and Proportion

Name: Edward Locke Due Date: December 7, 2020

Test your understanding of how color placement and size of color can affect the overall perception of a color palette. Below is a palette of colors, each of a different hue, value, and chroma. Below that is a composition that serves as the various proportions for this exercise. **This exercise is similar to Slide 5 of Chapter 7 Lecture PDF.**

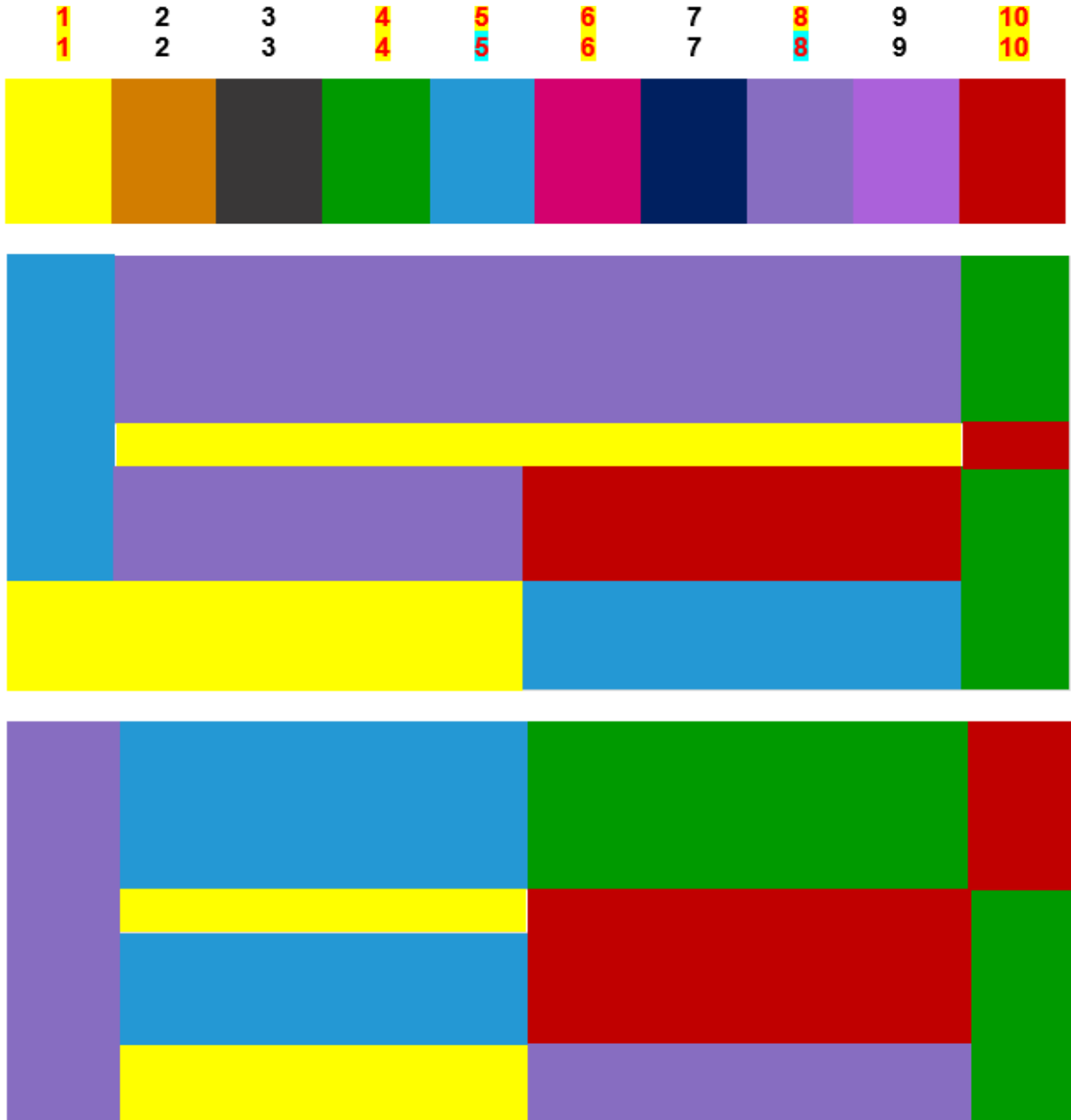
First, assign 3-5 colors from the options below to the composition and varying the locations. To do so, select a color or two colors and drag and drop them on top of the background. Click on the object to adjust the width and length to fit into the composition's shapes. Next, change only 1-2 colors from the first composition in the second composition. Repeat all other colors and their placement from the first composition into the second.

**The 5 color selected (Red/Green and Yellow/Violet Complementaries plus Blue) and the 2 colors changed (Violet and Blue):**





Alternatively:



# Exercise 8

## Color Harmony

Name: Edward Locke Due Date: December 7, 2020

Below are color palette's representing several types of color harmonies. Match the color harmony description with the correct illustration expressing this type of harmony. Click on the text-box description and place it to the right of the color palette.

Split-Complementary

Tetrad

Complementary

Monochromatic

Analogous

Triadic



Complementary

Split Complementary

Monochromatic

Tetrad

Triadic

Analogous

# Exercise 9

## Color and Variety

**Name:** Edward Locke **Due Date:** December 14, 2020

Using the interior restaurant example from chapter 9 below, create a color plan that illustrates the principles of variety and creates visual interest. You may use colored pencils, colored markers, paint, or digital media for the exercise. Print the image for physical application of colored media. For digital color, right click and save the image as a jpeg. Then open the file using a digital rendering program. Do not worry if you have not had instruction on hand or digital rendering at this point. The purpose of the exercise is on the application of color into interior space and the demonstration of variety and interest. However, do consider all that has been learned to this point and apply the principles and elements of design: balance, rhythm, emphasis, proportion and scale, unity and harmony in development of your color plan. Consider cultural relevancy and meaning of the colors.





Figure 1A. The un-interesting design shown in Chapter 9 PDF.

**Analysis of the interior space:** The interior of the restaurant space requires key colors to stimulate and introduce the perception of a fine-dining experience (Figure 1). The Chapter 9 PDF (Slide 15) shows an improved version (Figure 1B). In this exercise, the floor's color and materials have been kept while the other parts have been improved by changing colors, textures and materials, in order to apply the principles and elements of design, such as balance, rhythm, emphasis, proportion and scale, unity and harmony in the development of color plan. Cultural relevancy and meaning of the colors are based on the Irish cultural system as explained in Slide 62 of Chapter 1 PDF (Figure 2).

**Design Procedure:** Using the triadic color harmony (Violet, Yellow-Orange and Yellow-Green) from Slide 20 of Chapter 8 PDF, five versions of color plan have been tried in

Adobe Photoshop (*Figure 3*), the most acceptable one has been selected to add textured materials such as brick, mosaic, stucco, and marble (*Figure 4*).



Figure 1B. The improved version.

TABLE 1.1 Cross-Cultural Color Symbolism (China, Korea, Ireland, and Egypt)

HUE	CHINA	KOREA	IRELAND	EGYPT
<b>RED</b>	Good luck, happiness, and celebration	"Power and authority, high class and luxury"; some Koreans believe the color can prevent "misfortune," and as such, it is the color for the Korean soccer team	Red wool is believed to relieve sore throats	Historically, Egyptians associated themselves as "red people" and used natural materials to dye their skin red
<b>BLUE</b>	Represents the heavens, clouds, and immortality	Darker values associated with death	Peace and truth	Virtue, faith, wards off evil
<b>GREEN</b>	Infidelity of women when worn in clothing; youthfulness	Life, youth, prosperity	Represents Catholicism (national flag), shamrock for luck	National color, commonly used on mosques and places of worship, symbolizes fertility and strength
<b>YELLOW</b>	Wealth, power, imperial color of the Qing dynasty, masculine	"Relates to the sun, energy, and rich harvesting of the fall"	Favorite color among people	Prosperity, mourning, eternity
<b>PURPLE</b>	Not popular	Wealth, inner peace	Rosaries of the Catholic faith are commonly amethyst, represents cardinal direction east	Favored color of Cleopatra, used purpura snails for dye, faith
<b>ORANGE</b>	Happiness and good health	Result of yellow (energy) and red (power and love); orange represents cheerfulness and often is associated with youth because of its "casual" nature	Represents Protestants (national flag) because of William of Orange, the Protestant English king	Not used in ancient times; however, iron oxides and coppers were used with other minerals to produce red and green paints
<b>BLACK</b>	Water	Color of trigrams in their national flag, representing the elements of fire, water, earth, wood, and metal	Represents the devil and cardinal direction north	Dignity, luck, rebirth
<b>WHITE</b>	Death and mourning	Innocence, purity	Unity of two faiths (Catholic and Protestant) and represents cardinal direction south	Sacred, holy, used in ceremonial activities, joy

Figure 2. Cross-Cultural Color Symbolism Table.



Selected

Triadic  
Harmony



Figure 3. Five versions of color plan.

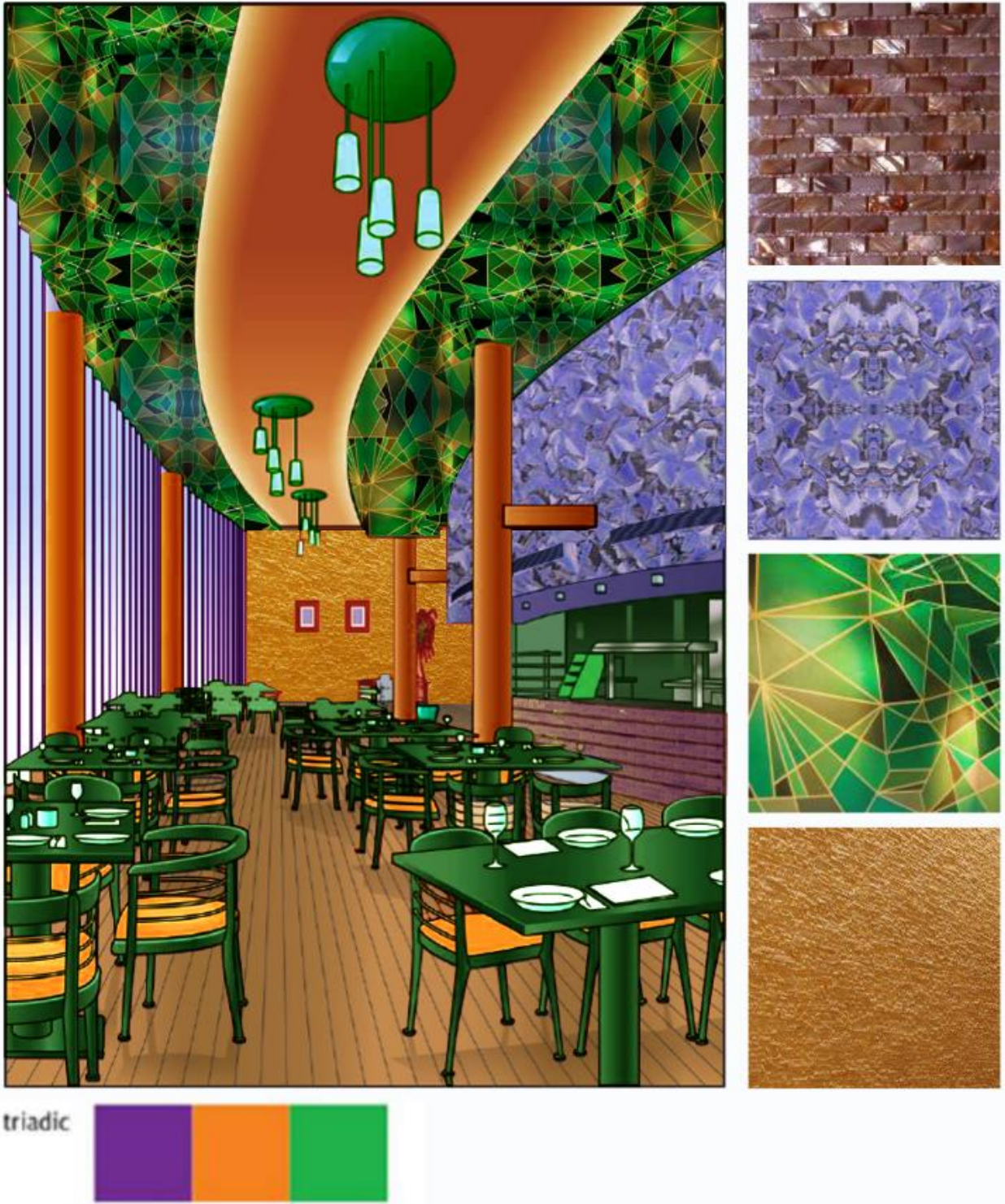


Figure 4. The selected version with textured materials applied.



# Exercise 10

## Nature and Color Rhythm

Name: Edward Locke Due Date: December 14, 2020

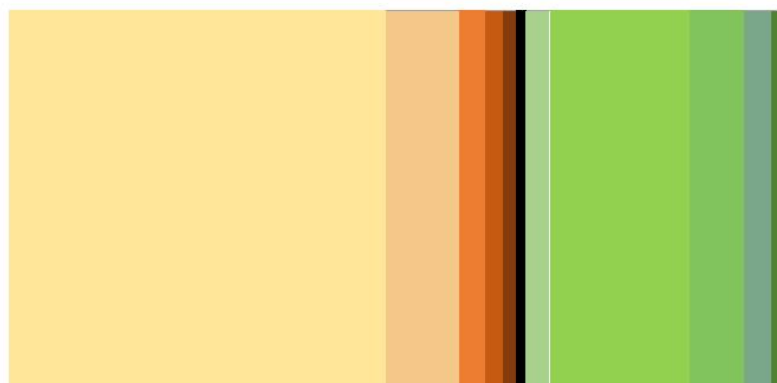
Below is a photo of a flower whose patterns and color provide a natural progression of color. Notice the distinct colors and values in the object and the relative hierarchy of color that creates movement from one hue to the next based on the proportions of that color.

In the empty rectangular space below the image, create a palette of colors that represents the hues, values, and chroma of the flower.

1. Right-click the sample gray rectangle
2. Move it to the blank *Color Palette Space* below
3. Right-click on the copied gray rectangle, select **Format Shape... / Fill / Color**
4. Change the color to match one of the colors in the flower image
5. Repeat the process to add more colors represented in the flower
6. Enlarge the rectangles of color by clicking a corner to stretch it vertically/horizontally
7. Widen each color to represent the proportion of that color



Sample



Color Palette Space

**THE  
END**