

What seems interesting to you about these color recipes?

Number of drops	White Cake Mix (1 package)	White Icing 1 can (16 oz.)	Egg Dyeing*
Red	50	24	20
Yellow	50	24	20
Green	50	24	20
Blue	50	24	20
Pretty Purple	24 Red + 16 Blue	12 Red + 8 Blue	5 Red + 15 Blue
Orange Sunset	50 Yellow + 8 Red	12 Yellow + 4 Red	17 Yellow + 3 Red
Teal	10 Blue + 2 Green	6 Blue + 4 Green	5 Blue + 15 Green
Mint Green	9 Green + 3 Yellow	6 Green + 2 Yellow	14 Green + 6 Yellow
Dusty Rose	12 Red + 4 Blue	6 Red + 2 Blue	14 Red + 6 Blue



1. List at least 5 observations.

So that we can express our observations in similar ways, let's use these words to describe the colors.

- **Hue** means the shade or tint of the color. This is not related to color intensity, transparency or lightness and darkness.
- **Saturation** means strength of the color according to its transparency
- **Shade** means the addition of white, gray, or black to the color.

2. What might you expect to happen if you used the "Pretty purple" recipe for egg dyeing as you colored icing instead? Try to describe the color that your icing might turn out to be.

3. Coloring an entire cake mix takes a lot more drops of food coloring than is used to color eggs. What might you expect to happen to your dyed eggs if you used the proportions for coloring an "orange sunset" cake when you were trying to dye "orange sunset" eggs?

4. Which of the colors in the chart have nearly the same proportions for cake mixes, cake icing, and egg dying?

We thought that it was strange that cake mix coloring, icing coloring, and egg dye coloring had different ratios for those new colors.

5. How could you change the drop quantities of the colors in the chart so that all the uses (cake mixes, icings, and egg dying) have nearly the same proportions? Try to keep the new total quantities roughly the same as the original quantities for each ratio.