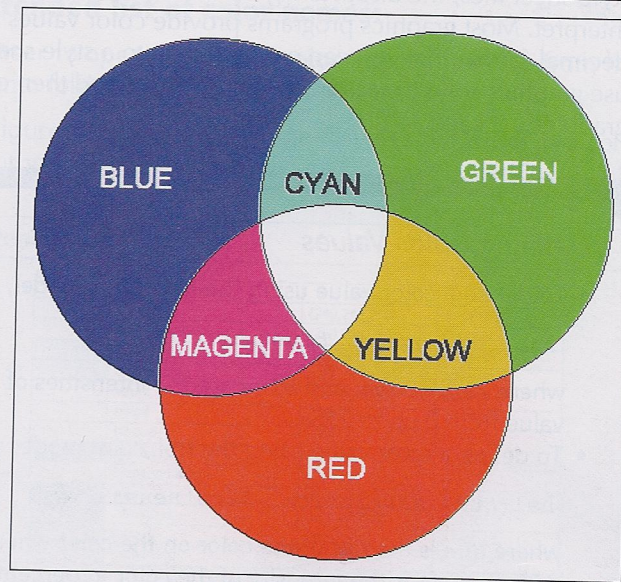


Figure 3-9 Color addition in the RGB color model

Varying the intensity of the three primary colors creates other colors. Orange, for example, is created from a high intensity of red, a moderate intensity of green, and a total absence of blue. CSS represents these intensities mathematically as a set of numbers called an **RGB triplet**, which has the format

```
rgb(red, green, blue)
```

where *red*, *green*, and *blue* are the intensities of the red, green, and blue components of the color. Intensity values range from 0 (absence of color) to 255 (maximum intensity); thus, the color white has the color value `rgb(255, 255, 255)`, indicating that red, green, and blue are mixed equally at the highest intensity, and orange is represented by `rgb(255, 165, 0)`. RGB triplets can describe 256^3 (16.7 million) possible colors, which is a greater number of colors than the human eye can distinguish. You can also enter each component value as a percentage, with 100% representing the highest intensity. In this form, you would specify the color orange with the following values:

```
rgb(100%, 65%, 0%)
```

The percentage form is less commonly used than RGB values, but many page designers find it easier to work with.

CSS also allows RGB values to be entered as hexadecimal numbers. A **hexadecimal** number is a number expressed in the base 16 numbering system rather than in the commonly used base 10 system. In base 10 counting, numeric values are expressed using combinations of 10 characters (0 through 9); hexadecimal numbering includes six extra characters: A (for 10), B (for 11), C (for 12), D (for 13), E (for 14), and F (for 15). For values above 15, you use a combination of those 16 characters. For example, 16 has a hexadecimal representation of 10, and a value of 255 is represented as FF in hexadecimal numbering. The style value for color represented as a hexadecimal number has the form

```
#redgreenblue
```

where *red*, *green*, and *blue* are the hexadecimal values of the red, green, and blue components. Therefore, the color yellow could be represented either by the RGB triplet

```
rgb(255, 255, 0)
```

or by the hexadecimal

```
#FFFF00
```