

Pretty as a Picture



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Digitizing Color

- **RGB Colors: Binary Representation**
 - Giving the intensities for the three constituent colors—red, green, blue—specifies color on monitor
 - Color intensity is represented as a numeric quantity in the range 0 through 255 (decimal)

- **Binary Numbers Compared with Decimal Numbers**
 - Number of digits is the base of numbering system
 - Binary is two digits: 0 and 1
 - Decimal is 10 digits: 0 through 9
 - Hexadecimal is 16 digits: 0 through 9, A through F

Black and White Colors

- A byte is allocated to each RGB intensity
 - The smallest intensity is 0000 0000
 - The largest is 1111 1111 in binary
 - This is 255 in decimal, and FF in hex
- Black (#000000) is no color; white (#FFFFFF) has full intensity for each RGB color (*these are HEX*)
 - Black: 0000 0000 0000 0000 0000 0000
 - White: 1111 1111 1111 1111 1111 1111 (*these are binary*)