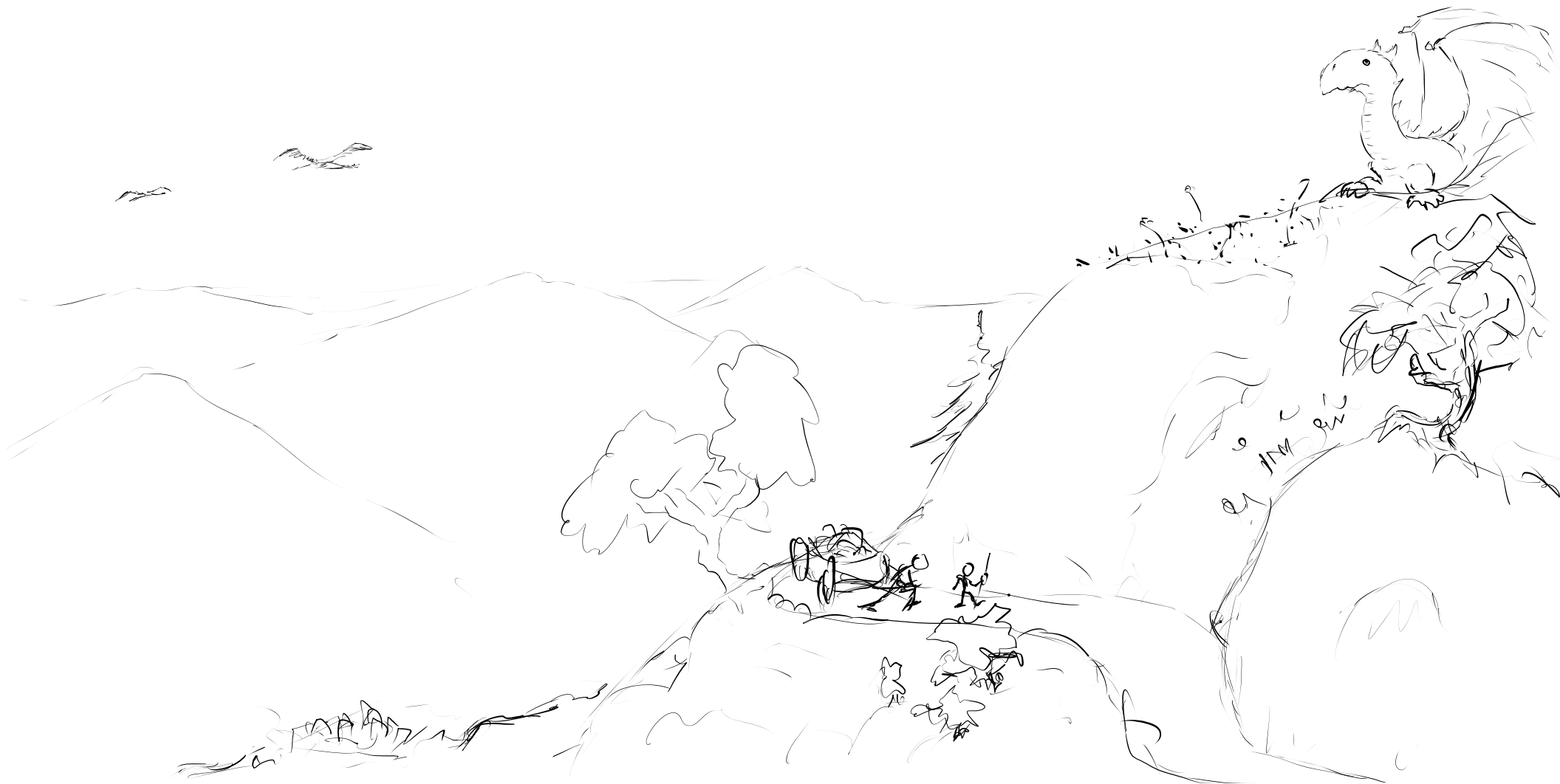




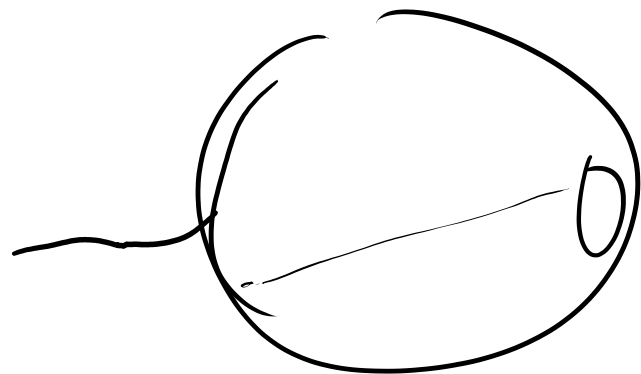
Binary

digits 0 & 1 → integers

- color
- numbers
- text

Color

kinds
3 cones



530nm

620nm

"blue" 700nm

green

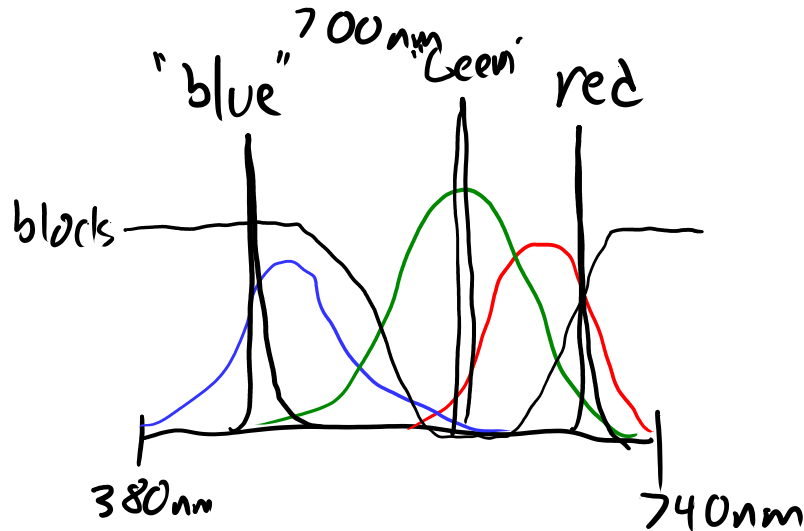
red

black

Pigment : block some light

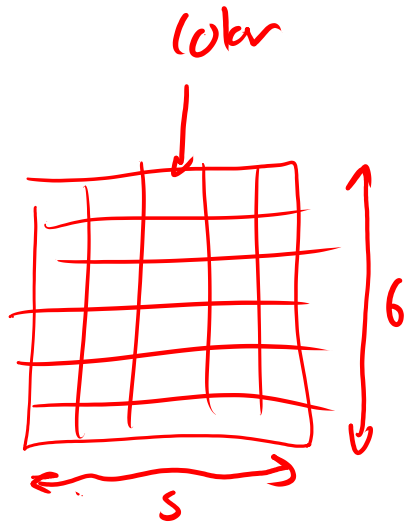
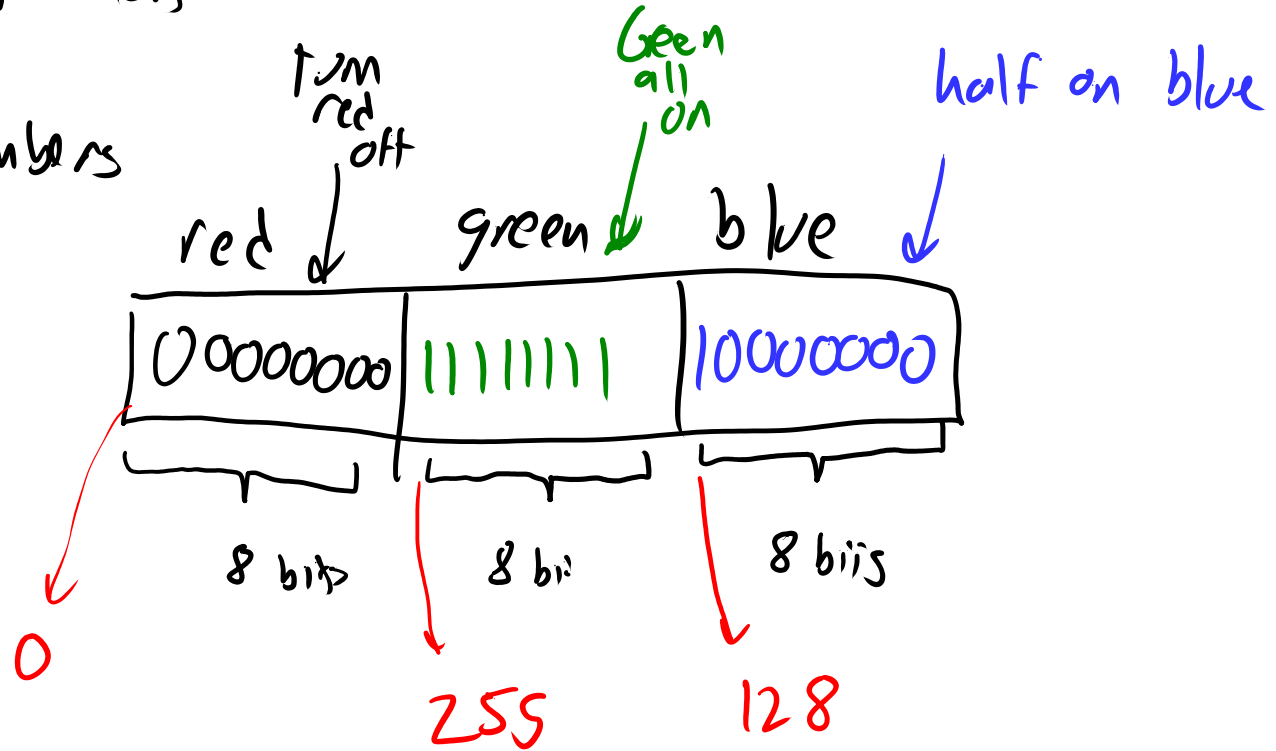
380nm

740nm



Machine: 3 light colors

data: 3 numbers



Hexadecimal representation of the bit patterns:

#	0000	0000	1111	1111	1000	0000
	0	0	F	F	8	0

Real world

1. Broke ^{it} into pieces
2. came up number for each piece
3. put together into data

0
1
edge

4-digit num meaning 7 (seven)

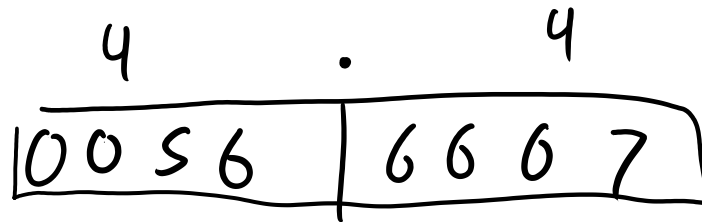
$$\begin{array}{r} 0007 \\ + 0007 \\ \hline 0014 \\ + 9999 \\ \hline \end{array}$$

$$\begin{array}{r} 0043 \\ \hline 10,013 \end{array}$$

Non-integer

$$56\frac{2}{3}$$

56.666666...

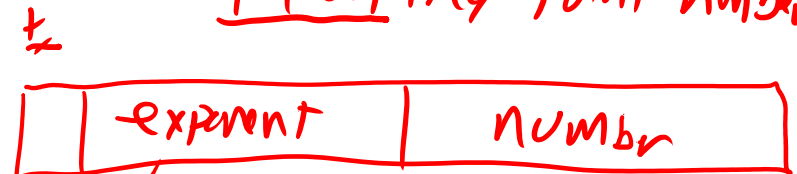


$$\frac{1}{5} = 0.2 \text{ decim}$$

0.001100110011... binary

Floating-point number

5.666... × 10¹





ASCII