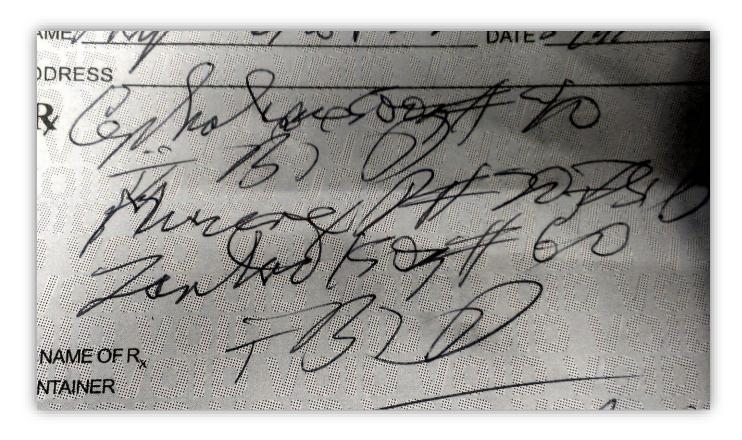
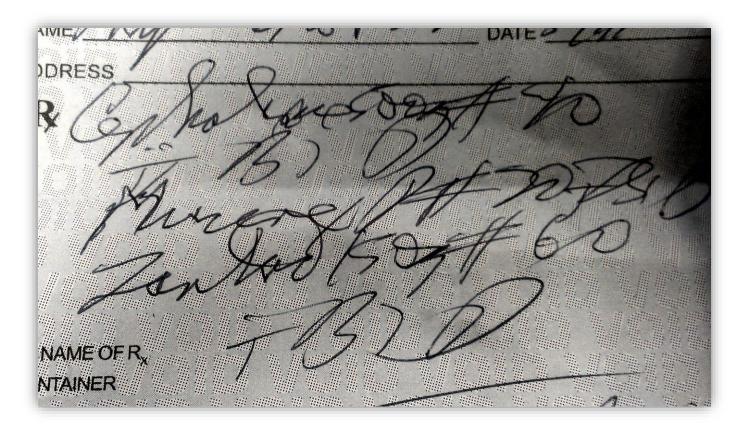
FINDING THRESHOLDS BETWEEN NUMBERS

DANIEL HRUSOVSKY

Let's Play a Game!

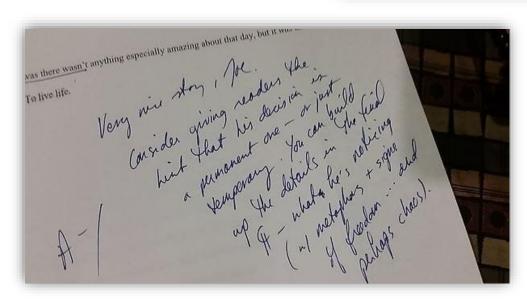


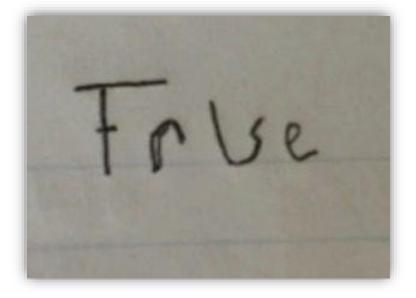
What does this sentence say?

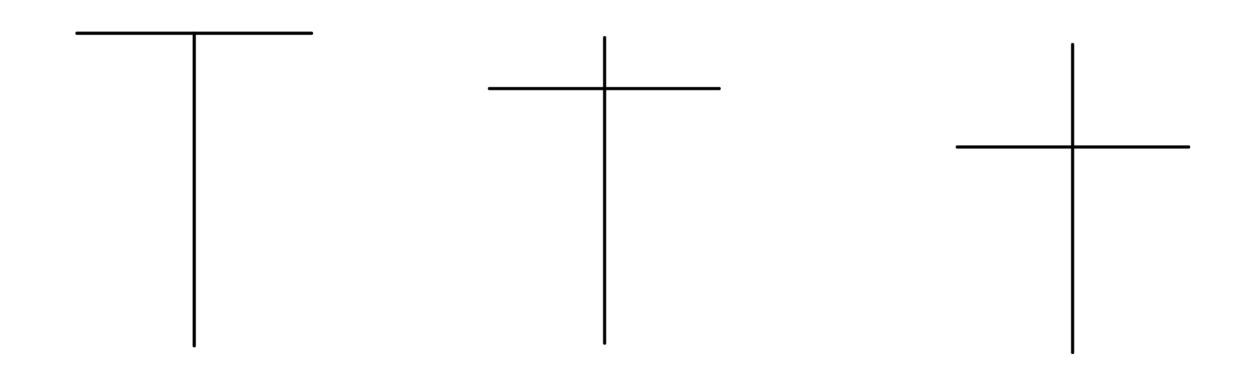


I do not know!

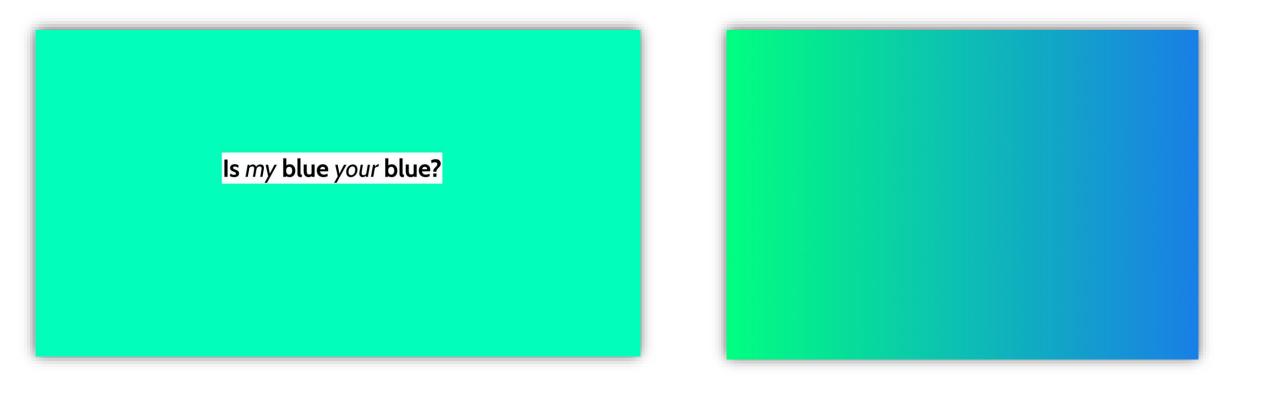
ver lest our our vers sent ver lest lest lest to the per trest to the trest to the



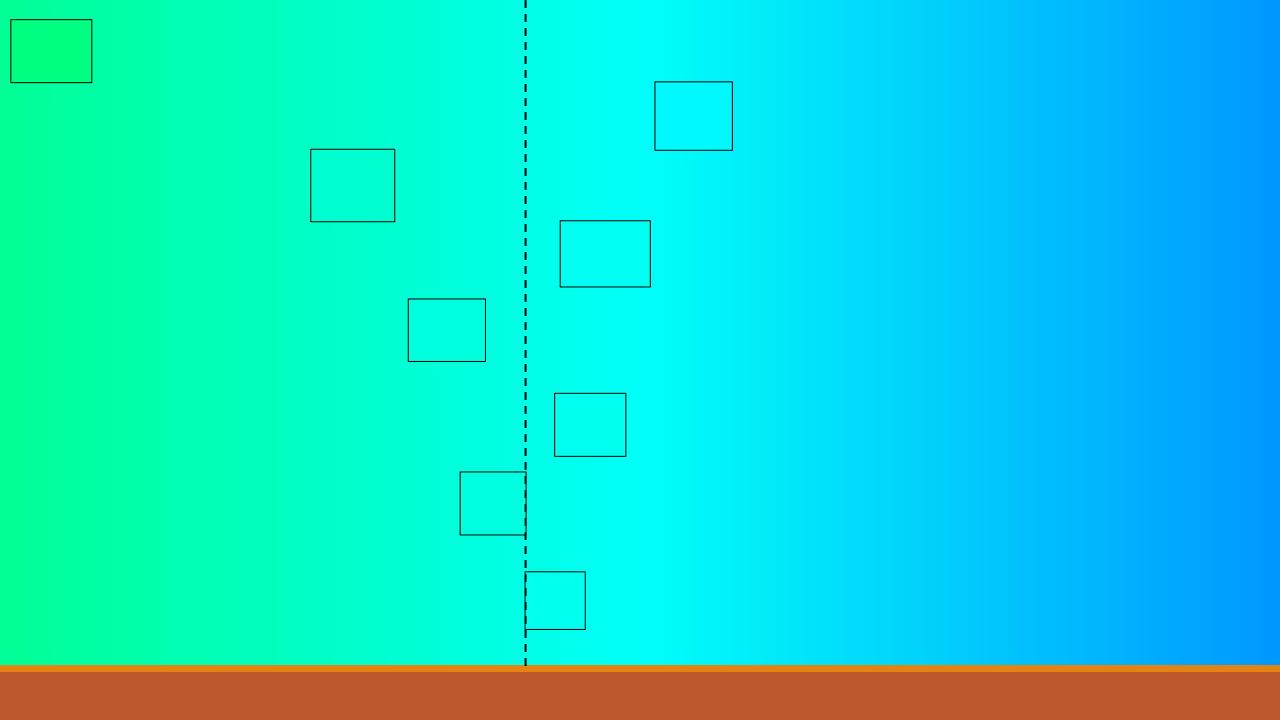


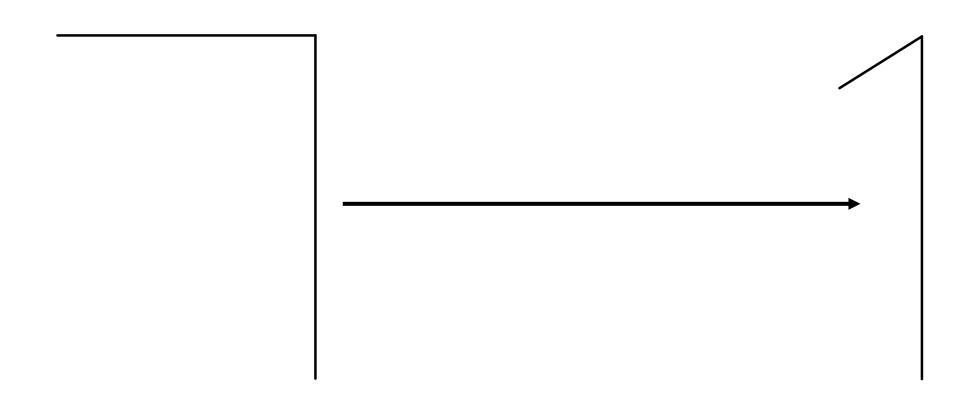


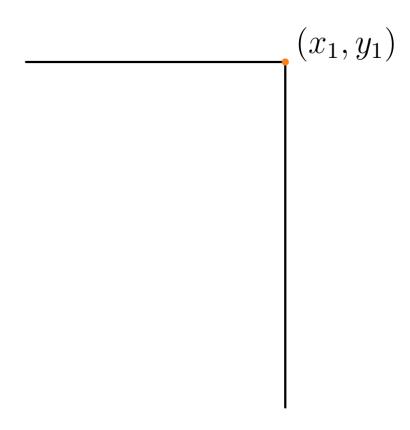
Find the threshold between 7 and 1.

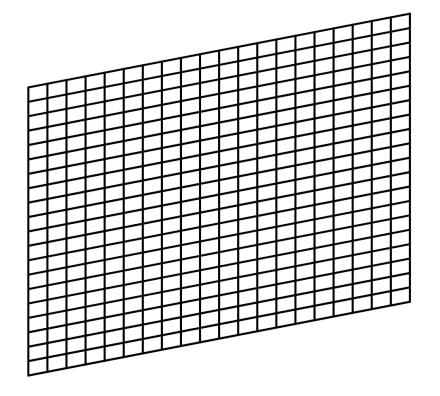


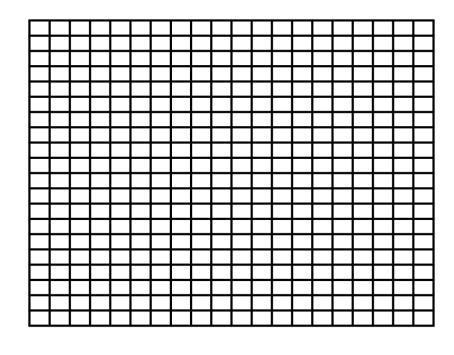
ismy.blue











Shearing Transformation

$$\left[\begin{smallmatrix} 1 & 0 \\ g & 1 \end{smallmatrix} \right] \cdot \left[\begin{smallmatrix} x_1 \\ y_1 \end{smallmatrix} \right] = \left[\begin{smallmatrix} x_1 \\ gx_1 + y_1 \end{smallmatrix} \right]$$

$$\begin{bmatrix} 1 & 0 \\ 0 & c \end{bmatrix} \cdot \begin{bmatrix} x_1 \\ gx_1 + y_1 \end{bmatrix} = \begin{bmatrix} x \\ y \end{bmatrix}$$

$$x_1 = x$$

$$c \cdot (gx_1 + y_1) = y$$
$$c = \frac{y}{gx_1 + y_1}$$

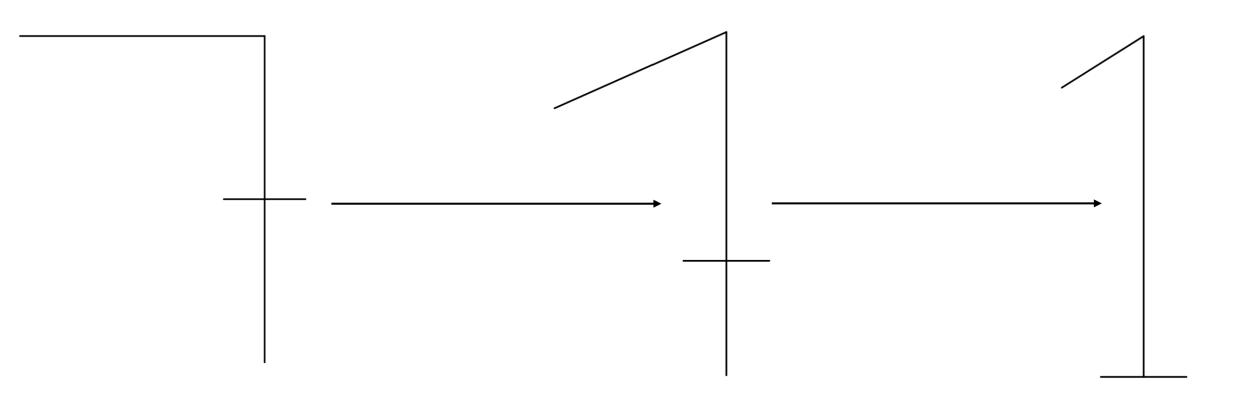
$$\left[\begin{smallmatrix} 1 & 0 \\ 0 & \frac{y}{gx_1+y_1} \end{smallmatrix}\right] \left[\begin{smallmatrix} 1 & 0 \\ g & 1 \end{smallmatrix}\right] \left[\begin{smallmatrix} x \\ y \end{smallmatrix}\right] = \left[\begin{smallmatrix} 1 & 0 \\ 0 & \frac{y}{gx_1+y_1} \end{smallmatrix}\right] \left[\begin{smallmatrix} x \\ gx+y \end{smallmatrix}\right] = \left[\begin{smallmatrix} \frac{y}{gx_1+y_1} (gx+y) \end{smallmatrix}\right]$$

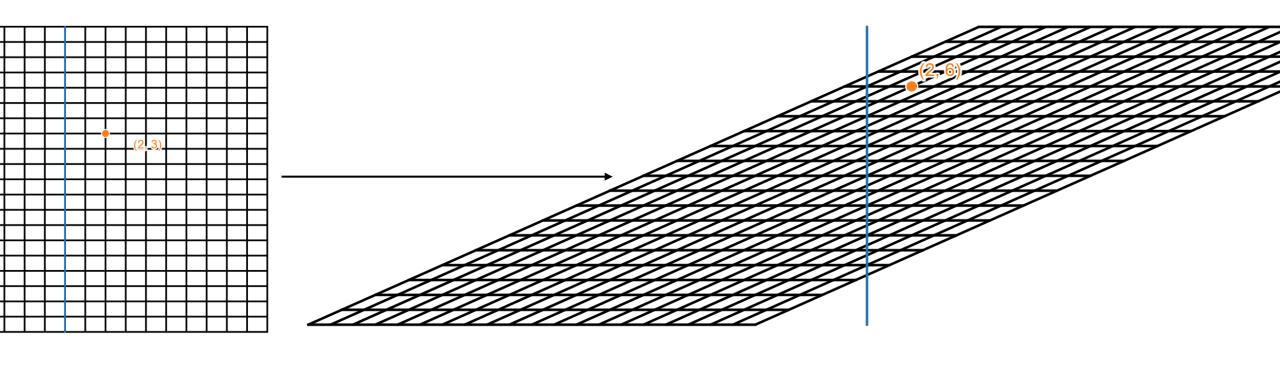
$$g = 0$$

$$(y - y_1) = \frac{gy_1}{gx_1 + y_1}(x - x_1)$$

$$\frac{gx_1 + y_1}{y_1}(y - y_1) = g(x - x_1)$$

$$(\frac{gx_1}{y_1} + 1)(y - y_1) = g(x - x_1)$$





$$\frac{4}{6}g + y = x_2\{x_1 - \frac{1}{2} \le x \le x_1 + \frac{1}{2}\}\$$

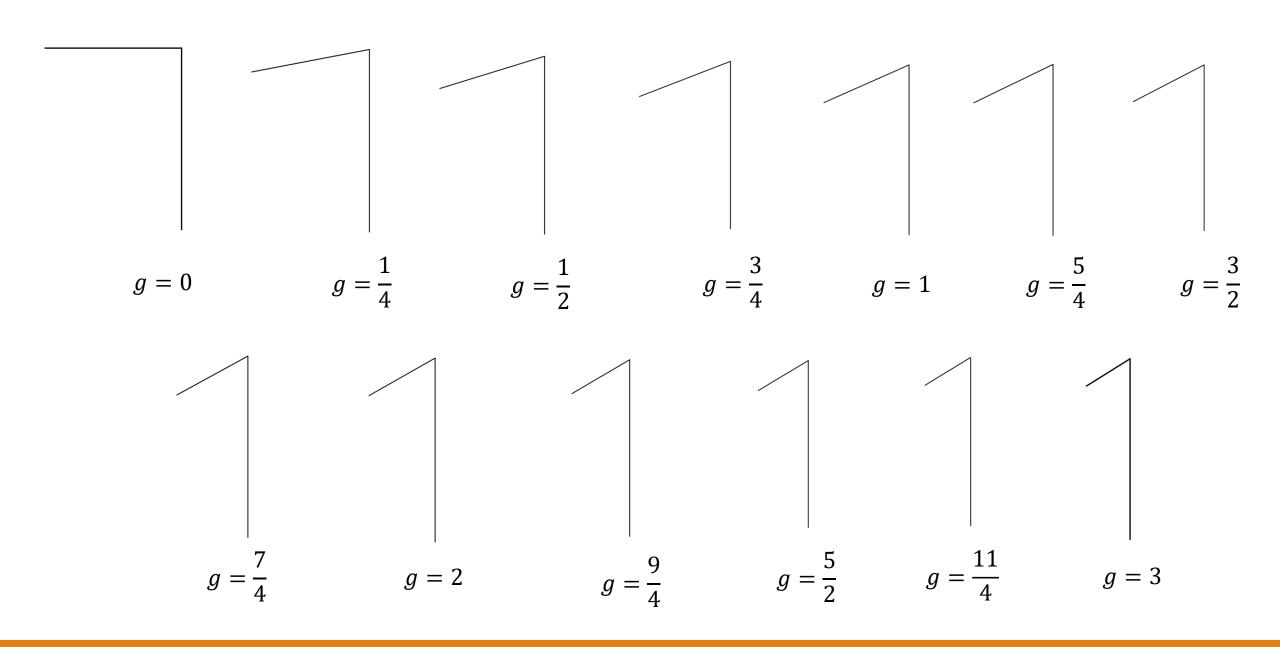
$$g = 0$$

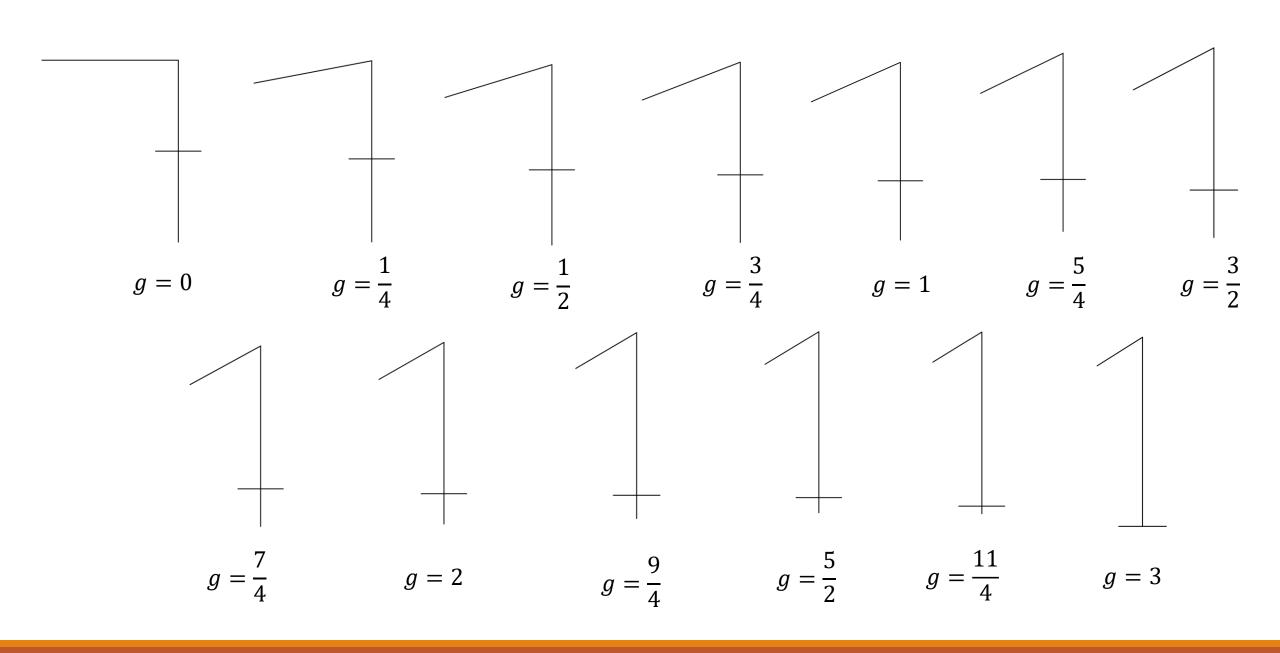
How do we present these figures to individuals?

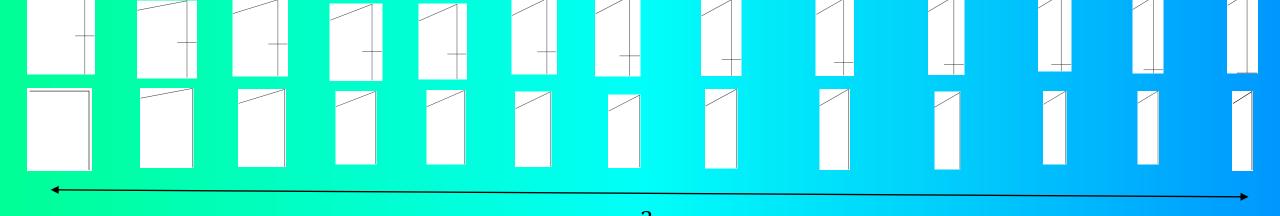
Is my blue your blue?

This is green Reset This is blue

Please choose whether this is a 1 or a 7.					
<u> </u>					
O 7					



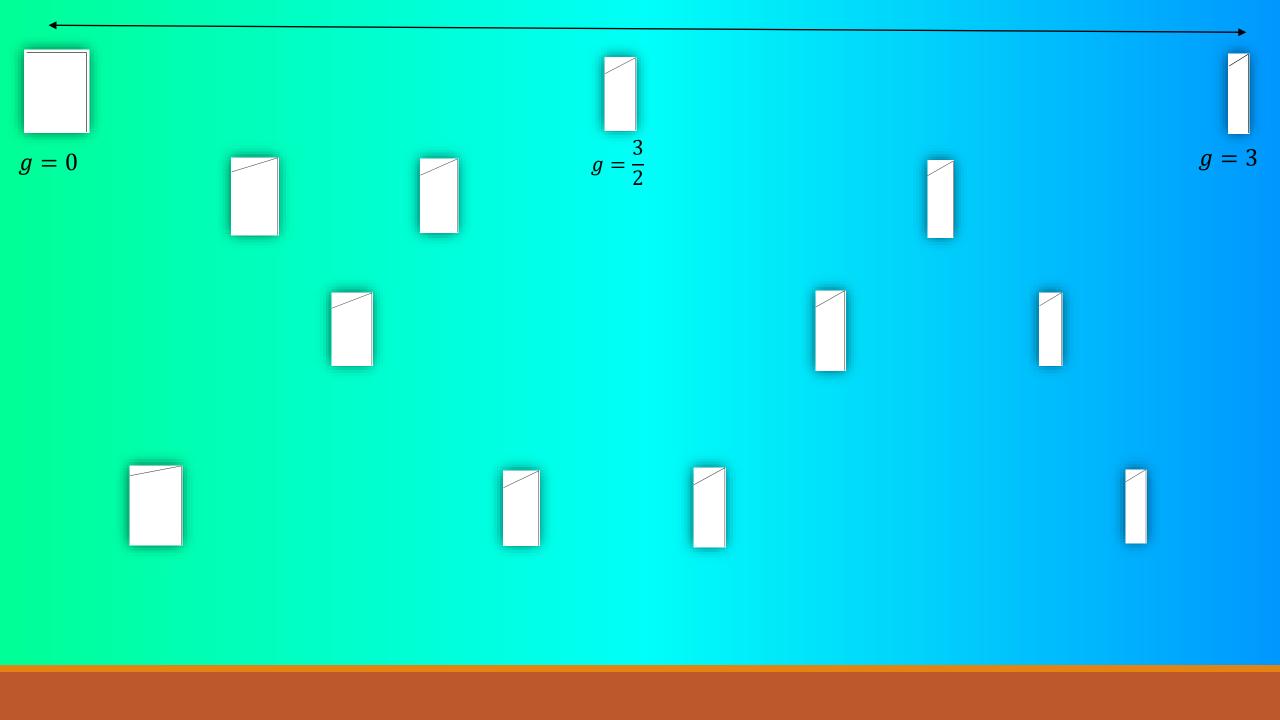


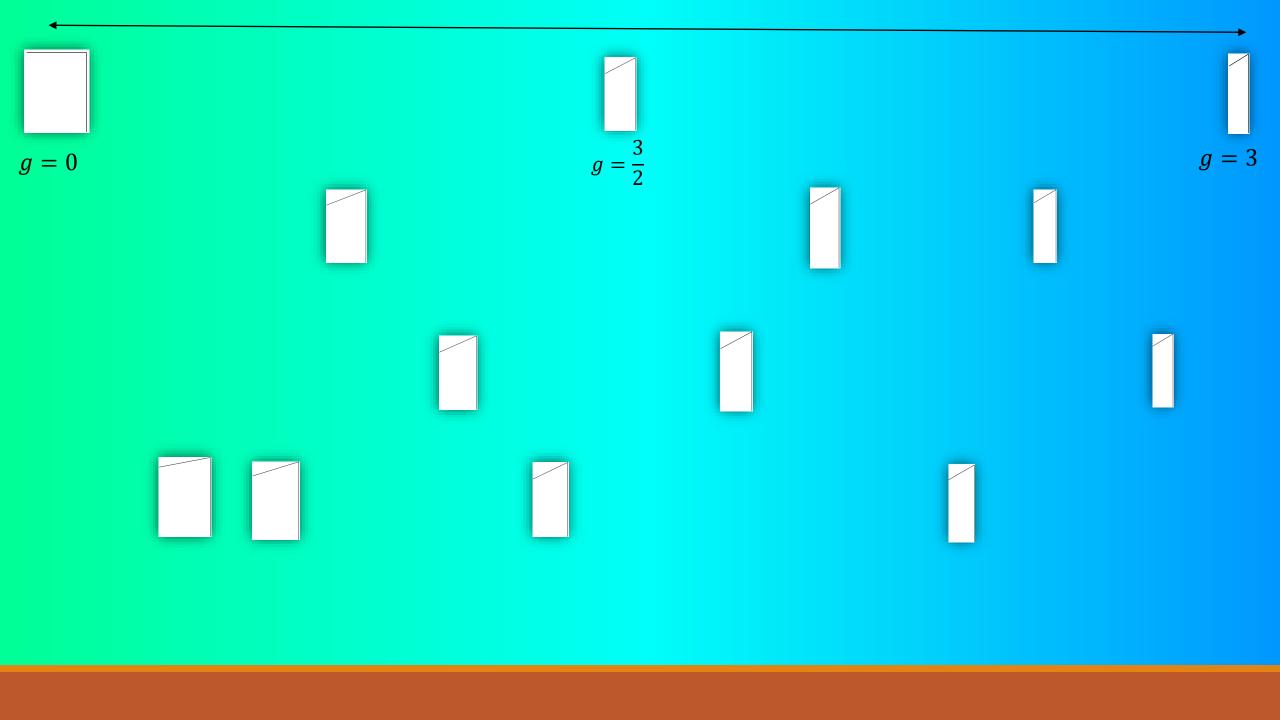


g = 3

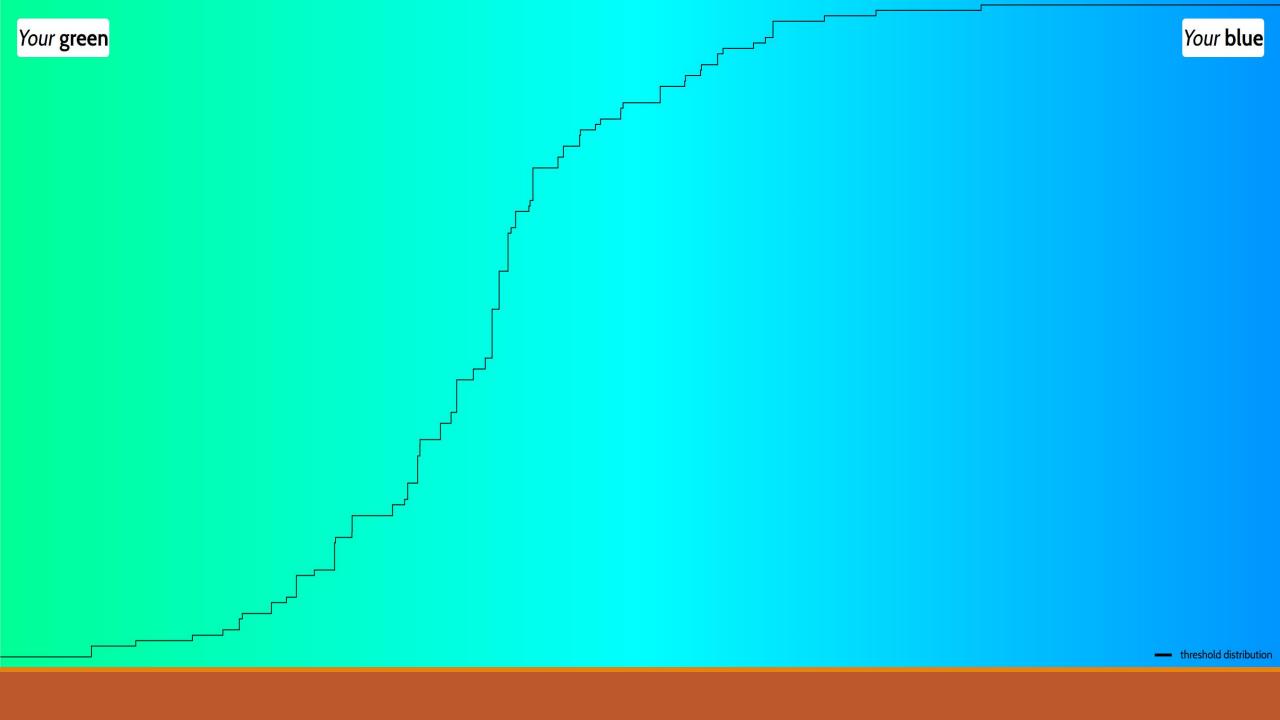
g = 0

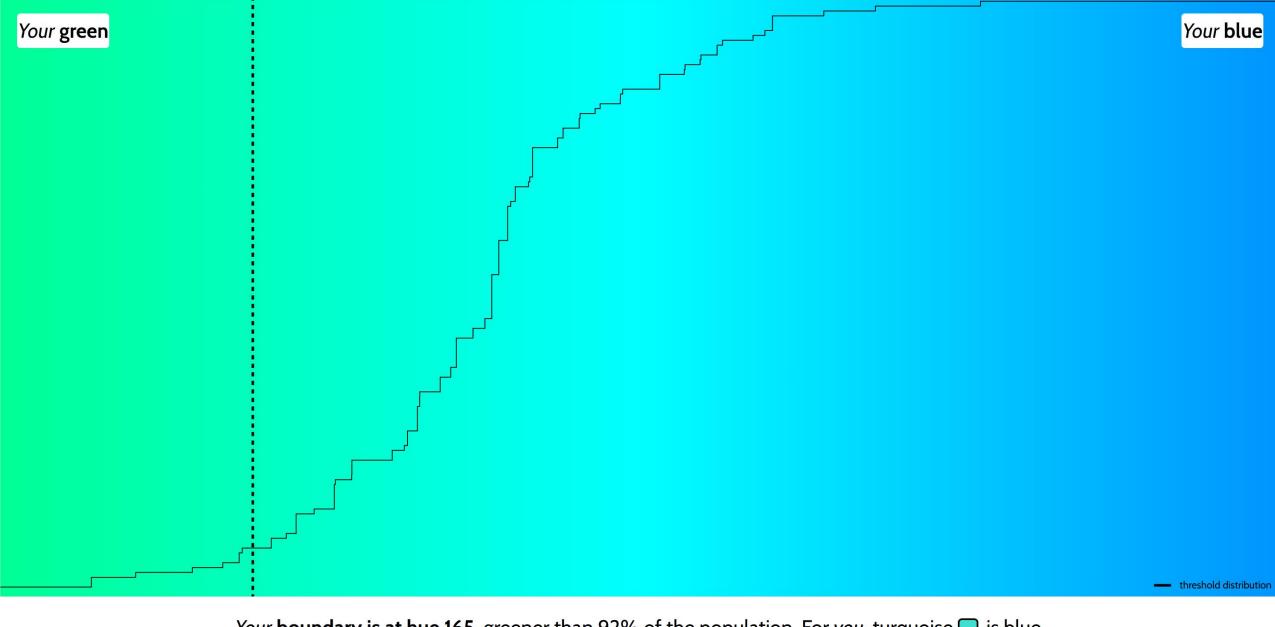






How do we analyze the survey?





Your boundary is at hue 165, greener than 92% of the population. For you, turquoise [is blue.

Find the threshold by looking at percentage of 7's.

