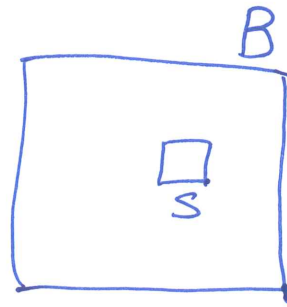
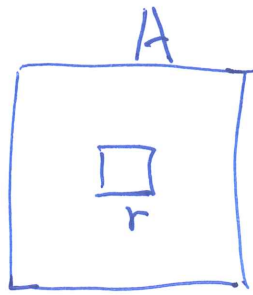


Linear intensity transformation

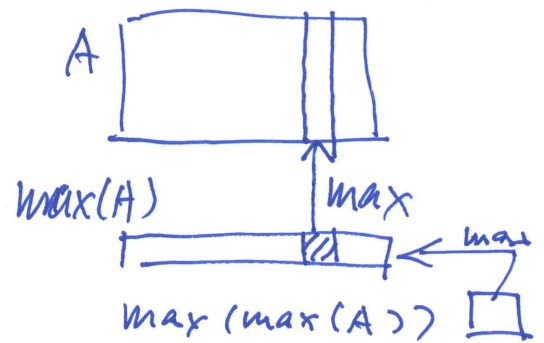


8-bit
representation

$$S = T[r]$$

$$1000 = I_{\max} = \max(\max(A))$$

$$100 = I_{\min} = \min(\min(A))$$



$$\frac{I_{\max} - r}{I_{\max} - I_{\min}} = \frac{255 - S}{255 - 0}$$

$$S = 255 - 255 \left(\frac{I_{\max} - r}{I_{\max} - I_{\min}} \right)$$

$$= 255 \left[1 - \frac{I_{\max} - r}{I_{\max} - I_{\min}} \right]$$

$$= 255 \frac{I_{\max} - I_{\min} - I_{\max} + r}{I_{\max} - I_{\min}}$$

$$= 255 \frac{(r - I_{\min})}{I_{\max} - I_{\min}}$$

