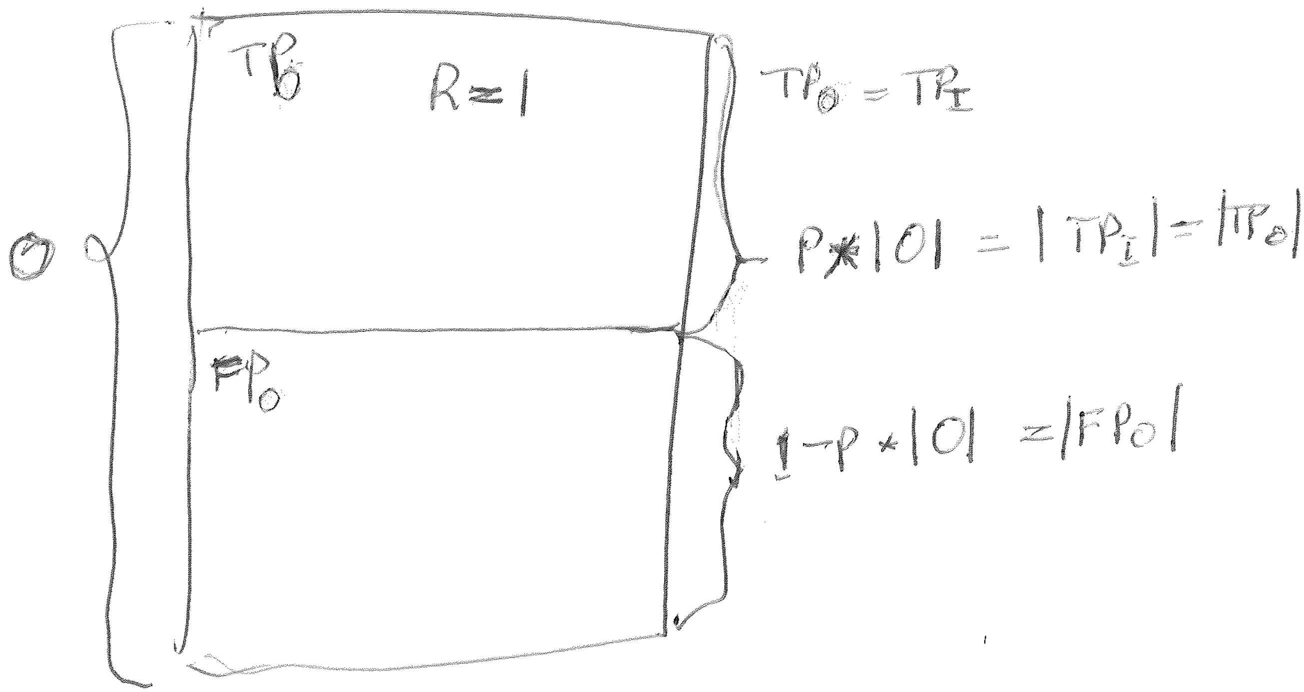

In any situation $\min P = \lambda$ $\leftarrow$ $\frac{|TP_I|}{|I|} = \lambda$

ratio of output size to input size $\frac{|O|}{|I|}$

when $R = 1$

$$\lambda = \frac{|TP_I|}{|I|} = P*|O|$$

$$\lambda = \frac{P \times |O|}{|I|}$$

$$\frac{\lambda}{P} = \frac{|O|}{|I|}$$

Let's examine $\frac{\lambda}{P}$ $\left(\lambda \frac{1}{P}\right)$ for $\lambda =$ .01, .05, .1, .2, ...9, .95, 1

$\frac{.01}{x} = .5 \quad \frac{x}{.01} = 2 \quad x = 2 \times .01 \quad = .02$

$x = 2 \times .05 \quad = .1$

$x = 2 \times .1 \quad = .2$

$x = 2 \times .2 \quad = .4$

$x = 2 \times .3 \quad = .6$

$x = 2 \times .4 \quad = .8$

$x = 2 \times .5 \quad = 1$

$x = 2 \times .6 \quad = 1.2$

$x = 2 \times .7 \quad = 1.4$

$x = 2 \times .8 \quad = 1.6$

$x = 2 \times .9 \quad = 1.8$

$x = 2 \times .95 \quad = 1.9$

$x = 2 \times 1 \quad = 2$

on assumption that $|O| = \frac{1}{2}|I|$
is the worst tolerable vetting size,
what is worst P that is acceptable
to achieve $R = 1$