13.7

$p(\text{inlier}) = 1 - p_o = p_i$

$p(\text{correct sample}) = p_i^n$

$p(\text{no correct sample in } k \text{ trials}) = (1 - p_i^n)^k$

$(1 - p_i^n)^k < 0.01 = p_{\text{fail}}$ i.e. 99% chance of getting uncorrupted subset of points

$$k > \frac{\log 0.01}{\log (1 - p_i^n)}$$

e.g., $p_i = 0.5$, $n = 4$

↑ 50% inlier prob ↑ homography

$$\underline{k > \frac{-2}{\log 15/16}} \simeq \underline{70}$$