# Assignment 36

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## 36-1

$$P(52,30,68,7|k) = \begin{cases} \frac{1}{k^4} & k \geq 68 \\ 0 & otherwise \end{cases}$$

$$\sum_{k=1}^{\infty} c \cdot P(52,30,68,7|k) = 1$$

$$c \cdot \sum_{k=1}^{\infty} P(52,30,68,7|k) = 1$$

$$c = 922742.15044495$$

$$\sum_{k=1}^{\infty} c \cdot P(k|52,30,68,7) = \begin{cases} \frac{922742.15044495}{k^4} & k \geq 68 \\ 0 & otherwise \end{cases}$$

$$P(68 \leq k \leq n) = \sum_{k=68}^{n} \frac{922742.15044495}{k^4} = 0.95$$

$$n = 184$$

You can be 95% sure that they have no more than 184 tanks