

Six Sided Die:

(1) Two constraints - ME (infeasible)

$$\bar{y}_1 = 3 \quad (\text{from } N=1000 \text{ Tosses})$$

$$\bar{y}_2 = 4 \quad (\text{from } N=2000 \text{ Tosses})$$

A) Simple Case - ME:

$$\bar{y} = (3 \times 1 + 4 \times 2) / 3 = 3\frac{2}{3}$$

B) GME version

$$V = (-C, 0, C)$$

$$C = 3\sigma_y; \text{ But adjust by } N:$$

$$\Rightarrow i=1(y_1): \quad C = 3\sigma_y$$

$$i=2(y_2): \quad C = 3\sigma_y/2$$

$$\text{Note: } \bar{y} = (y_1 + y_2) / 2$$

Experiment: Relations between  $\lambda_1, \lambda_2$  and  $H(P), H(W)$  as  $C$  changes  
graphical representation?

(1) Simple Case ME with  $\bar{y} = 3\frac{2}{3}$

(2) Simple Case GME with  $\bar{y}$  but w/noise (error bounds as above but assume the true mean is  $3\frac{1}{2}$ )

(3) GME (version B above)

Possible Figure:

