Econ 4170

Quiz 1: 8/25

1. Toss = 1 $\tilde{w_1} \sim \langle 1, 0; \alpha, 1-\alpha \rangle$

$$M_1 = \alpha \cdot 1 + (1-\alpha) \cdot 0 = \alpha$$

2. Toss = 2 $\tilde{w_2} \sim \langle 1, 2, 0; \alpha, \alpha(1-\alpha), 2(1-\alpha) \rangle$

$$M_2 = \alpha + 2\alpha(1-\alpha)$$

3. Toss $\leftarrow \infty$

Toss = n $\quad \tilde{w_n} \underline{\quad} \langle (n+1 \text{ outcomes}); \qquad\qquad \rangle$

$$p = .2^{n-1}$$

$$? \quad proba = \alpha + \alpha(1-\alpha)^{n-1}$$

$$M_n = \alpha + 2^{n-1} \cdot \alpha(1-\alpha)^{n-1}$$

4. $T \rightarrow \infty$

M should keep increasing based on above equation