

SHUBHAM QUP 7A

180749

HW 8

classmate

Date _____

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$$\text{probability} = \frac{1 - (q/p)^a}{1 - (q/p)^A}$$

$$\text{length} = \frac{1}{p-q} \left[A \left(\frac{1 - (q/p)^a}{1 - (q/p)^A} \right) - a \right]$$

$$p = 0.6$$

$$q = 0.4$$

$$a = \Delta$$

$$A = 2\Delta, \Delta/2$$

~~prob = 1 - (2/3)^{20}~~

$$2\Delta = \Delta \left(1 + \frac{1}{100} \right)^m$$

$$m \approx 70$$

$$\text{prob} = \frac{1 - (2/3)^a}{1 - (2/3)^{20}}$$

$$\text{expected length} = \frac{1}{0.2} \left[70 \left(\frac{1 - (2/3)^a}{1 - (2/3)^{20}} \right) - a \right]$$

$$a = \Delta$$

current stock price