Quiz B for 4:00 Class: 11/12/12   Name ___*Key*___

Assume you are planning to buy a call on Pepsico with an exercise price of $67.50 that expires 158 days from today on 4/19/13. If you buy the call, you only plan to hold it for 95 days until 2/15/13. Pepsico's stock price currently equals $69 per share. By 2/15/13, you expect Pepsico's stock price to rise to $72 per share and by 4/19/13, you expect Pepsico's stock price to rise to $85 per share. By a year from today (11/12/13), you expect Pepsico's stock price to fall back to $65 per share.

Using the following information, set up the equations and plug in as many numbers as possible to use the Black-Scholes option pricing model to value this option.

	Between now and:		
	2/15/13	4/19/13	11/12/13
Standard deviation of returns on:			
Pepsico's assets	5.2%	6.4%	7.1%
Pepsico's stock	10.2%	12.1%	14.6%
Pepsico's bonds	2.5%	3.6%	3.8%
An equivalent put	25.6%	32.5%	34.4%
This call	19.0%	21.0%	24.2%
Annualized return on:			
U.S. Treasuries (all < 1%):	0.120%	0.117%	0.204%
Pepsico's bonds	0.35%	0.45%	0.50%

Wall Street Journal Questions are on the back of this page.

$$+5\left(d_1 = \frac{\ln\left(\frac{69^{+5}}{PV(K)}\right)}{.121\sqrt{\frac{158}{365}^{+3}}^{+3}} + \frac{.121^{+3}\sqrt{\frac{158}{365}^{+3}}}{2}\right) \quad \textcircled{22}$$

$$+5\left(PV(K) = \frac{67.50^{+10}}{(1.00117)^{158/365^{+3}}}^{+10}\right) \quad \textcircled{28}$$

$$+5\left(d_2 = d_1 - .121^{+3}\sqrt{\frac{158}{365}^{+3}}\right) \quad \textcircled{11}$$

$$+8\left(C = 69^{+5}(N(d_1)) - PV(K)(N(d_2))\right) \quad \textcircled{13}$$

$+1 \Rightarrow$ look up $N(d_1) + N(d_2)$ on tables or with Excel