

CHE374 - Quiz 4

Question 4

Risk Free Rate (RF)	2.2%
Market Rate (MR)	8%
Beta (β)	0.75
Current Stock Price w/o Dividend(C_0)	\$35.00

Dividend per share = 4%
(DIV)

	Formula	Substitution	Answer	
CAPM	$E(R) = RF + \beta(MR - RF)$	$E(R) = 0.022 + 0.75(0.08 - 0.022)$	0.0655	A_1 ✓
Stock Price 1 year from now	$= C_0 * (1 + A_1)$	$= 35(1 + 0.0655)$	\$37.2925	A_2 ✓
Dividend at year end	$= A_2 * (DIV)$	$= 37.2925(0.04)$	\$1.4917	A_3 ✓
Stock Price 1 year from now without dividend	$= A_2 * (1 - DIV)$	$= 37.2925(1 - 0.04)$	\$35.8008	A_4 ✓
Stock Price 2 years from now	$= A_4 * (1 + A_1)$	$= 35.8008(1 + 0.0655)$	\$38.1457	A_5 ✓
Dividend at year end	$= A_5 * (DIV)$	$= 38.1457(0.04)$	\$1.52583	A_6
Stock Price 2 years from now without dividend	$= A_5 * (1 - DIV)$	$= 38.1457(1 - 0.04)$	\$36.61987	A_7
Stock Price 2.5 years from now	$= A_7 * (1 + A_1)^{0.5}$	$= 36.61987(1 + 0.0655)^{0.5}$	\$37.8001	A_8

Question 1) \$38.15 (4 sig figs)

Question 2) \$36.62 (4 sig figs)