Quiz B for 2:30 Class: 11/6/13 Name ________________________________

Use the following information to answer Short Answers 1 and 2 below.

Assume that the risk-free interest rate equals 2%, that DeadBerry's current stock price is $8.50 per share, and that there is a 70% chance that DeadBerry's stock price will fall by $1.50 per share one year from today and a 30% chance that DeadBerry's stock will rise by $2.50 per share one year from today.

Short Answer 1 (15 points): Calculate the value of a call with a $9 strike price.

Short Answer 2 (15 points): Given your answer above, what portfolio of stocks and bond would be equivalent to the call?

Problem (75 points): Twit Inc (a service that sends one-word posts out to subscribers) has debt that matures for $30 million four years from today.

a. Sketch a graph that shows the possible payoffs on Twit's debt and the specific payoffs on the firm's debt if the firm's assets are worth $20 and $36 million four years from today.

b. On a separate graph show how the payoff structure of the bonds can be duplicated with a position in risk-free bonds and options. Show the specific payoffs on the individual assets and portfolio if Twit's assets are worth $20 and $36 million four years from today. Be sure to clearly label everything.

c. Based only on what drives option prices, briefly discuss how the value of a firm's stock and bonds would change if the firm's assets suddenly become less volatile.

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