Finance 5360 Quiz B: 7/28/15 Name Key

Assume that Amorgy Inc. has a 25% of earning an EBIT of $100 million per year, a 30% chance of earning an EBIT of $175 million per year, a 35% chance of earning an EBIT of $225 million per year, and a 10% chance of earning an EBIT of $300 million per year. Assume also that Amorgy's current interest expense equals $150 million. Amorgy is considering issuing additional $100 million of permanent debt at a 10% interest rate and uses the proceeds to repurchase common stock.

a. How does the value of Amorgy change if markets are perfect? Note: Answer is a number.
b. How does the value of Amorgy change if the only market imperfection is corporate taxes and the corporate tax rate equals 35%? Note: Answer is a number.
c. How does the value of Amorgy change if the only market imperfections are corporate and personal taxes? Assume the corporate tax rate equals 35%, the personal tax rate on equity income equals 20%, and the personal tax rate on interest income equals 30%. Note: Answer is a number.
d. How would your answer to "c" change if we also assume the presence of stockholder-bondholder conflict? Note: ~~Answer is NOT a number.~~ All you need to do is indicate the direction of the change.
e. How would your answer to "d" change if we also assume bankruptcy costs exist? Note: ~~Answer is NOT a number.~~

Interest expense on new debt = 10 million; Total interest = 160 million

a. Ø or no change +10

b. $100(.35) = 35$ million +15

c. +5 $T^* = 1 - \left(\frac{(1-(.75)(.35))(1-.2)}{(1-.3)}\right) = +.1571 \Rightarrow .1571(100) = +15.71$ million (+15, +5, +5, +5, +5)

d. lower +5

e. lower +5