

### Question

AROI Inc. is in the agricultural business. The company could maintain its return on equity at 15% and keep paying dividend 40% of its earnings. One investor is considering to invest in this company with required rate of return 15%. Please help this investor by answering the following questions.

1. What is the company expected dividend growth rate?
2. An investor intends to hold AROI Inc.'s stock for **only 3 years** and expects to sell at price \$26.50 at the end of year 3. Assume that last year AROI paid its dividend \$2 per share ( $D_0 = \$2$ ) and expected dividend growth rate is from (1), what would be a proper stock price for the investor?
3. AROI Inc. has an R&D project which is expected to complete in the next two years. If the project is successful, this will lead earnings and dividends to grow at a rate of 40% at the end of year 3, 20% at the end of year 4, after which growth would return to 10%. Given dividend paid last year at \$2 per share, what is the appropriate value of AROI Inc.'s common stock under this scenario?