Introduction to Valuation Extra Problems

These problems are from our in-class question game.

1. If I invest $10,000 into a mutual fund and in 20 years my account balance is $52,500, what is my annual return?

2. How long will it take to triple my investment if I can earn 4.5%?

3. You will receive $1,000 in one year $2,000 in two years and $4,000 in four years. If your required return is 8% and the present value of these cash flows is $9,550, what is the amount you will receive in 3 years?

4. You inherited $500,000. You immediately invest the money into an account earning 5%. After ten years you take out $350,000 from this account for a down payment on a house. How much do you have in the account 25 years from now?

5. You won a prize with two payout options. Option A pays out $50,000 in one year and then another $150,000 in two years. Option B pays out $100,000 each of the next two years. Assuming an 8% discount rate which option should you choose?

6. For the previous question is there any positive rate at which Option A would be preferred?

Answer to above problems

1) 8.65%
2) 25 years
3) $5,000
4) $965,553
5) Option B
6) No.