1. (25%) The premium for a one-year off-market forward contract with a forward price of $200 is $18.18. The premium for a 200-strike one-year European call is $32.98 and for a 200-strike one-year European put is X. The risk-free rate of interest is 10% effective per annum. Determine X.

(A) $2.98  (B)$3.45  (C)$14.80  (D)$16.28  (E)$18.10

2. (25%) The spot price of a share of XYZ corp stock is $100. The premium for a 12-month European put option with an exercise of $100 is $2.50. The effective rate is 10%. Find the price of a 12-month European call option with a strike price of $100 on XYZ corp stock.

(A)$2.50  (B)$4.75  (C)$8.47  (D)$11.59  (E)$12.50

Your answers: (Leave blank if you need no grading)

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3. (25%) You buy a call with an exercise price of $90 for a premium of $10, and you sell a call with an exercise price of $105 for a premium of $3. Both options have 9-month maturities. The nominal annual interest rate is 8% convertible quarterly. What is the maximum possible profit produced by this position?

(A)$4.34  (B)$7.43  (C)$7.57  (D)$8  (E)$15

4. (25%) You buy a call with an exercise price of $90 for a premium of $10, and you sell a call with an exercise price of $105 for a premium of $3. Both options have 9-month maturities. The nominal annual interest rate is 8% convertible quarterly. What is the price of the stock such that you would break even on your position, as of the expiration date?

(A)$94.34  (B)$97.43  (C)$97.57  (D)$98  (E)$99