

27. You are given the following information about a securities market:

- (i) There are two nondividend-paying stocks,  $X$  and  $Y$ .
- (ii) The current prices for  $X$  and  $Y$  are both \$100.
- (iii) The continuously compounded risk-free interest rate is 10%.
- (iv) There are three possible outcomes for the prices of  $X$  and  $Y$  one year from now:

| Outcome | $X$   | $Y$   |
|---------|-------|-------|
| 1       | \$200 | \$0   |
| 2       | \$50  | \$0   |
| 3       | \$0   | \$300 |

Let  $C_X$  be the price of a European call option on  $X$ , and  $P_Y$  be the price of a European put option on  $Y$ . Both options expire in one year and have a strike price of \$95.

Calculate  $P_Y - C_X$ .

- (A) \$4.30
- (B) \$4.45
- (C) \$4.59
- (D) \$4.75
- (E) \$4.94