

Question #292

Answer: C

$$245 = {}_2p_{40} \cdot 270 \text{ and } 300 = {}_3p_{40} \cdot 395$$

Present value of premium:

$$1000[1 + (245 / 274)(1 / 1.12) + (300 / 395)(1 / 1.12^2)] = 2403.821.$$

Present value of profit:

$$-400 + 150 / 1.12 + 245 / 1.12^2 + 300 / 1.12^3 = 142.775.$$

$$\text{PV Profit} / \text{PV premium} = 5.94\%$$