99. Solution: C

We use the relationships $\text{Var}(aX+b) = a^2\ \text{Var}(X)$, $\text{Cov}(aX,bY) = ab\ \text{Cov}(X,Y)$, and $\text{Var}(X+Y) = \text{Var}(X) + \text{Var}(Y) + 2\ \text{Cov}(X,Y)$. First we observe

$17{,}000 = \text{Var}(X+Y) = 5000 + 10{,}000 + 2\ \text{Cov}(X,Y)$, and so $\text{Cov}(X,Y) = 1000$.

We want to find $\text{Var}\left[(X+100)+1.1Y\right] = \text{Var}\left[(X+1.1Y)+100\right]$

$= \text{Var}\left[X+1.1Y\right] = \text{Var}\,X + \text{Var}\left[(1.1)Y\right] + 2\ \text{Cov}(X,1.1Y)$

$= \text{Var}\,X + (1.1)^2\,\text{Var}\,Y + 2(1.1)\text{Cov}(X,Y) = 5000 + 12{,}100 + 2200 = 19{,}300.$