

168. For an insurance:

- (i) Losses can be 100, 200 or 300 with respective probabilities 0.2, 0.2, and 0.6.
- (ii) The insurance has an ordinary deductible of 150 per loss.
- (iii) Y^P is the claim payment per payment random variable.

Calculate $\text{Var}(Y^P)$.

- (A) 1500
- (B) 1875
- (C) 2250
- (D) 2625
- (E) 3000

169. The distribution of a loss, X , is a two-point mixture:

- (i) With probability 0.8, X has a two-parameter Pareto distribution with $\alpha = 2$ and $\theta = 100$.
- (ii) With probability 0.2, X has a two-parameter Pareto distribution with $\alpha = 4$ and $\theta = 3000$.

Calculate $\Pr(X \leq 200)$.

- (A) 0.76
- (B) 0.79
- (C) 0.82
- (D) 0.85
- (E) 0.88