

123. Annual prescription drug costs are modeled by a two-parameter Pareto distribution with $\theta = 2000$ and $\alpha = 2$.

A prescription drug plan pays annual drug costs for an insured member subject to the following provisions:

- (i) The insured pays 100% of costs up to the ordinary annual deductible of 250.
- (ii) The insured then pays 25% of the costs between 250 and 2250.
- (iii) The insured pays 100% of the costs above 2250 until the insured has paid 3600 in total.
- (iv) The insured then pays 5% of the remaining costs.

Determine the expected annual plan payment.

- (A) 1120
- (B) 1140
- (C) 1160
- (D) 1180
- (E) 1200