74. A primary insurance company has a 100,000 retention limit. The company purchases a catastrophe reinsurance treaty, which provides the following coverage

Layer 1:	85% of 100,000 excess of 100,000
Layer 2:	90% of 100,000 excess of 200,000
Layer 3:	95% of 300,000 excess of 300,000

The primary insurance company experiences a catastrophe loss of 450,000.

Calculate the total loss retained by the primary insurance company.

(A) 100,000

(B) 112,500

(C) 125,000

(D) 132,500

(E) 150,000

50. In Year 1 a risk has a Pareto distribution with $\alpha = 2$ and $\theta = 3000$. In Year 2 losses inflate by 20%.

An insurance on the risk has a deductible of 600 in each year. P_i, the premium in year *i*, equals 1.2 times the expected claims.

The risk is reinsured with a deductible that stays the same in each year. R_i, the reinsurance premium in year *i*, equals 1.1 times the expected reinsured claims.

$$\frac{R_1}{P_1} = 0.55$$

Calculate $\frac{R_2}{P_2}$.

(A) 0.46

(B) 0.52

(C) 0.55

(D) 0.58

(E) 0.66

75. A primary liability insurer has a book of business with the following characteristics:

- All policies have a policy limit of 500,000
- The expected loss ratio is 60% on premiums of 4,000,000

A reinsurer provides an excess of loss treaty for the layer 300,000 in excess of 100,000.

The following table of increased limits factors is available:

Limit	**ILF**
100,000	1.00
200,000	1.25
300,000	1.45
400,000	1.60
500,000	1.70

Calculate the reinsurer's expected losses for this coverage (answer to the nearest 000s).

(A) 840,000

(B) 847,000

(C) 850,000

(D) 862,000

(E) 871,000