a/s/m

Actuarial Study Materials

Learning Made Easier

Flashcards for SOA Exam STAM

1st Edition

Table 2: Rating system

★★★★★	Essential—appears repeatedly on every exam
★★★★	Important—appears on every exam
★★★	Average importance—regularly appears on exams
★★	Not so important—appears occasionally on exams, or easy to derive as needed
★	Obscure—on syllabus, but unlikely to appear on exam. Sometimes this indicates a formula not covered by all the reading options. No released exam uses this formula or concept, and students have never reported a question from an unreleased exam requiring this formula or concept.

★

Five components of auto insurance

1. *Liability insurance (bodily injury and property damage)*
2. *Uninsured, underinsured, and unidentified motorist coverage*
3. *Medical benefits*
4. *Collision*
5. *Comprehensive*

★

Two ways for insurance company to recover losses

50F

1. *Subrogation*
2. *Salvage*

★

Five components of homeowners insurance

1. *Damage to dwelling*
2. *Damage to garage/other structures on premises*
3. *Damage to contents*
4. *Additional living expenses*
5. *Liability*

★★

Disappearing deductible

52F

Deductible of d that decreases linearly to 0 at $d + k$

★★★

Coinsurance clause

If policy limit is less than $100k\%$ *of value at time of damage, insurance pays* $\dfrac{limit}{(k \times value)}$ *times loss.*

★★★★

Loss Elimination Ratio

115F

$$\text{LER}_X(d) = \frac{\mathbf{E}[X \wedge d]}{\mathbf{E}[X]}$$

★★

Loss Elimination Ratio for exponential

$$\text{LER}(d) = 1 - e^{-d/\theta}$$

★★

Loss Elimination Ratio for two-parameter Pareto

$$\text{LER}(d) = 1 - \left(\frac{\theta}{d+\theta}\right)^{\alpha-1}$$

$$\alpha > 1$$

★★

Loss Elimination Ratio for single-parameter Pareto for $d \geq \theta$

$$\text{LER}(d) = 1 - \frac{(\theta/d)^{\alpha-1}}{\alpha}$$

$$\alpha > 1, d \geq \theta$$

★★★★

Formula for ILF

119F

$$\text{ILF}(U) = \frac{\mathbf{E}[X \wedge U]}{\mathbf{E}[X \wedge B]}$$

where B is basic limit

★

Three cautions for calculating ILFs

1. *Losses may not be independent of ILF.*
2. *Policy limit selected may depend on likelihood of loss.*
3. *Losses but not LAE are limited.*