

Subject CT6

Corrections to 2014 study material

Comment

This document contains details of any errors and ambiguities in the Subject CT6 study materials for the 2014 exams that have been brought to our attention. We will incorporate these changes in the study material each year. We are always happy to receive feedback from students, particularly details concerning any errors, contradictions or unclear statements in the courses. If you have any such comments on this course please email them to CT6@bpp.com.

You may also find it useful to refer to the Subject CT6 threads on the Actuarial Discussion Forum. (You can reach the Forums by clicking on the “Online Learning” button on the ActEd homepage and then clicking on “Discussion Forums”, or by going to www.acted.co.uk/forums/.)

Important note

This document was last revised significantly on 29th November 2013. The date on which any subsequent corrections have been added is noted below.

Chapter 3, Page 29 (added 10 June 2014)

The last sentence of Core Reading should say $Ga(1, \lambda) \equiv Exp(\lambda)$ and not $Exp(1 / \lambda)$.

Chapter 4, Page 7

Result 1.3 should be part of the Core Reading (rather than ActEd text), and the text should read:

The mean amount paid by the reinsurer is:

$$E(Z) = \int_M^{\infty} (x - M) f(x) dx$$

Chapter 4, Page 8

The Core Reading derivation of $P(W < w)$ is missing some additional (explanatory) lines of Core Reading:

$$\begin{aligned} P(W < w) &= P(X < w + M \mid X > M) \\ &= \frac{P(X < w + M \text{ and } X > M)}{P(X > M)} && \text{(using Bayes' Formula)} \\ &= \frac{P(M < X < w + M)}{P(X > M)} \\ &= \int_M^{w+M} \frac{f(x)}{1 - F(M)} dx && \text{(since } F(M) = P(X < M)) \\ &= \frac{F(w + M) - F(M)}{1 - F(M)} \end{aligned}$$

This derivation also uses the result: $P(a < X < b) = \int_a^b f(x) dx = F(b) - F(a)$.