Title

Firstname Lastname
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Abstract

—!!!—an abstract is required—!!!—

Keywords: lifecontingencies, R.

1. Introduction

This vignette shows numerical tests that compares lifecontingencies computations with figure shown in published textbooks. Yet very incomplete.

```
R> #load lifecontingencies package
R> library(lifecontingencies)
```

2. Financial mathematics

3. Actuarial mathematics

(Bowers, Jones, Gerber, Nesbitt, and Hickman 1997, p 111), whole life insurance., at 4%.

```
R> data(soa08Act)
R> #should be 0.01577285
R> Axn(soa08Act, x=30, n=10, i=0.04)
```

```
[1] 0.01577283
```

(Bowers *et al.* 1997, p 111), variance of above mentioned insurance.

```
R> #should be 0.01247099
R> Axn(soa08Act, x=30, n=10, i=0.04,power=2)-Axn(soa08Act, x=30, n=10, i=0.04,power=1)^2
```

```
[1] 0.01247098
```

(Bowers *et al.* 1997, p 112), A_{30}, at 6%.

```
R> #should be 102.4835
R> 1000*Axn(soa08Act, x=30,i=0.06)

[1] 102.4835
```

(**?**, p 437), $\ddot{a}_{50:\overline{20}|}$

```
R> #should be 0.01155
R> Axn(soa08Act, 50,20)/axn(soa08Act, 50,20)

[1] 0.0115451
```

References

Bowers NL, Jones DA, Gerber HU, Nesbitt CJ, Hickman JC (1997). *Actuarial Mathematics, 2nd Edition*. Society of Actuaries. ISBN 9780938959106.

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