MAP 4 Quiz 5	175 / 5	177				Na	ame:		Γ	Pate: O	ctober 3, 2	2018
Show a Each qu					ise cor	rect no	tation.	Simpli	fy ansv	vers co	mpletely.	
Number Given t			comple	ete indi	vidual	data fo	r a mor	tality s	tudy or	10 dra	agons:	
	$x_i$ :	3,	3,	3,	4,	5,	7,	7,	8,	9,	9	

1. Use the empirical distribution to approximate the variance of the estimator used to approximate the probability that a dragon dies within 6 years.

2. Determine a 95% linear symmetric confidence interval for the probability that a dragon dies within 6 years.

(Note that the 97.5 percentile of the standard normal distribution is 1.96.)

Numbers 3, 4, and 5: For a mortality table with a select period of two years, you are given:

x	$q_{[x]}$	$q_{[x]+1}$	$q_{x+2}$	x + 2
50	0.050	0.065	0.080	52
51	0.055	0.070	0.085	53
52	0.060	0.075	0.090	54
53	0.065	0.080	0.095	55

## 3. Determine 1000 $_{3}p_{[52]}$

4. Using a uniform distribution of deaths assumption between integer ages, determine  $1000_{1.5|0.5}q_{[50]}$ 

5. Using a constant force of mortality assumption between integer ages, determine  $1000_{1|1.5}q_{[51]+0.5}$