

**STAT 472**  
**Quiz 7**  
**Fall 2018**  
November 28, 2018

1. A life insurance company sells a whole life policy to (80). The death benefit is 100,000 payable at the end of the year of death. Annual premiums are payable for the life of the policy.

You are given the following reserve basis for full preliminary term reserves:

- i.  $i = 0.05$
  - ii. Mortality follows the Standard Ultimate Life Table.
- a. (3 points) Calculate the first year premium under full preliminary term reserves.
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  - b. (5 points) Calculate the premium for all years after the first under full preliminary term reserves.

c. (10 points) Calculate the full preliminary term reserves in the table below:

$t$	${}_tV^{FPT}$
0	
0.7	
1	
2	
2.2	
3	

d. (2 points) Explain why a company would use full preliminary term reserves instead of net premium reserves.