

On 1 January 2004, a life insurance company issued Whole Life assurances to lives then aged 45 exact. The sum assured was £50 000 with benefits payable at the end of the year of death. Premiums are payable annually in advance.

On 1 January 2020, there were 845 of these policies still in force and, during 2020, nine of these policyholders died.

(i) Calculate the mortality profit during 2020, assuming the insurance company uses the following basis for both premiums and reserves. Mortality AM92 ultimate. Interest 4% per annum. Expenses none

(ii) Explain why the result in part (i) has arisen.