

### EX.2.2.6, Sauer3

Given the  $1000 \times 1000$  matrix  $A$ , your computer can solve the 500 problems  $Ax = b_1, \dots, Ax = b_{500}$  in exactly one minute, using  $A = LU$  factorization methods. How much of the minute was the computer working on the  $A = LU$  factorization? Round your answer to the nearest second.