```
%B11102112 李家睿
function s = sum_arse(start_val,com_diff,N) % Calculates the sum of the first N
terms of an arithmetic sequence
         s = (N / 2) * (2 * start_val + (N - 1) * com_diff); % Sum formula for
arithmetic sequence
end
N_1 = sum_arse(3,3,333) % Calculates the sum of the sequence {3, 6, 9, ..., 999}
```

```
N_1 =
166833
```

```
N_2 = sum_arse(20,20,50) % Calculates the sum of the sequence {20, 40, 60, ...,
1000}
```

```
N_2 =
25500
```

```
%Today, we implemented a MATLAB function to calculate the sum of an arithmetic
sequence.
% The function uses a formula that takes the first term, common difference,
% and the number of terms to calculate the sum efficiently.
% We tested the function with two different sequences,
% and the results confirmed that the function works correctly,
% showing how programming can help solve mathematical problems quickly and
accurately.
```