

# Foundations of Information Retrieval

## Exercise 7

Exercise session: 17.12.2015  
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### 1. Search engine evaluation

1. A collection of documents contains 20 documents that are relevant for a given query. For this query, the search engine returns 8 relevant and 10 not relevant documents.
  - a. Compute **precision** and **recall** of this search result as well as the **F<sub>1</sub>-measure**.
  - b. What are the advantages of the F-measure compared to the arithmetic mean of precision and recall?
2. A collection of documents contains 10 documents that are relevant for the query q. For this query, the search engines S<sub>1</sub> and S<sub>2</sub> return the following relevant (R) and non-relevant (N) documents:

S<sub>1</sub>:        NNNRR NNRRR  
S<sub>2</sub>:        RRNNN NNRRN

Draw a precision-recall diagram for the both search results and compare the quality of the search results based on the **interpolated precision at 20% recall**.