

## Correct use of operators and formulating a search query

Please write down the subject you have chosen:

The search for big prime numbers
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### Formulating a search query

1. Combine **two** search terms from the 'Search terms assignment' by using an appropriate operator and parentheses. Write your query in the table below. **Only use two terms and don't include the alternative terms here!**

Search query	("Large primes" search) OR ("Big primes" AND applications)
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2. Search in the database you chose in the 'Search terms assignment' and fill in the number of search results.

Number of results search query 1	328 results
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3. Now combine the terms from step 1 with the alternative terms you found in the 'Search terms assignment' and write down your query in the table below. Don't forget to use Boolean operators, parentheses, quotation marks and truncation.

Search query 2	("Large primes" search) OR ("Big primes" AND applications) AND (Cryptograph* AND primes)
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4. Search with this query in the database you chose in the 'Search terms assignment' and fill in the number of search results.

Number of results search query 2	181 results
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### Explaining the difference in the number of results

Explain the difference in the amount of results between the two queries. Remember that a good query is mostly responsible for relevant results, so be critical of what you did. Use the following terms in your answer:

- Boolean operators
- Parentheses

- Quotation marks
- Truncation

In the first search query, using the OR operator on the search queries of the previous assignment “Large prime search” and “Big primes AND applications” made our search more broad, by including the search for the Large primes (1<sup>st</sup> query), and the applications of big prime numbers (2<sup>nd</sup> query.).

The use of quotation marks in “Big primes” and “Large Prime” is to allow for the search query to recognize the terms as one phrase, rather than different keywords.

We used the parentheses to differentiate between the expressions. If we hadn’t used the parentheses then the search query engine might have interpreted it as “ “Large prime” search” OR “Big primes” AND “Applications”, meaning that our search query broadened to the Large prime search (1<sup>st</sup> query) the Big primes (2<sup>nd</sup> query) but narrowed it down to only it’s applications (Now 3<sup>rd</sup> query). This is why the use of parentheses helped our search be more precise as to what we expected.

On the second search query we decided to add the term (with parentheses) “Cryptograph\* AND primes” using the operator AND, to narrow down the searches to primes related to Cryptography, Cryptographic, Cryptographical technologies. This unlimited truncation, broadened the use of the terms related to Cryptography.