$$score(w) = TF_{w,d} \cdot IDF_w$$

$$TF_w = \frac{f(w)}{\sum_k f(w_k)}$$

$$IDF_w = log \frac{|D|}{1 + |d : w \in d|}$$

$$D = reference\ corpus$$

Query:
euclid's postulate
elements parallel mathematics

Euclid, the Father of Mathematics.

Euclid of Alexandria was born about 325 BC and he died about 265 BC He is called the Father of Mathematics, and is best known for his treatise on mathematics, The Elements. It is said that this treatise may make Euclid the leading mathematics teacher of all time. Much of what we know about Euclid comes from a summary by the Greek philosopher Proclus in 450AD, which states that Euclid, "put together the Elements, collecting many of Eudoxus' theorems, perfecting many of Theaetetus', and provided indisputable demonstration for things which were only somewhat loosely proved by his predecessors. This man lived in the time of the first Ptolemy. For Archimedes, who came immediately after the first Ptolemy, makes mention of Euclid: and, further, they say that Ptolemy once asked him if there was in geometry any shorter way than that of the Elements, and he answered that there was no royal road to geometry. He is then younger than the pupils of Plato but older than Eratosthenes and Archimedes for the latter were contemporary with one another, as Eratosthenes somewhere says."

The "first Ptolemy" is Ptolemy I, Alexander the Great's general and ruler of Egypt. From the clues in this passage it can be surmised that Euclid flourished around 300 B.C. It is most probable that Euclid received his mathematical training in Athens from the pupils of Platomathematicians on whose works The Elements were based. He may himself have been a Platonist, but this does not follow from the text by Proclus quoted above.

If little has ever been made of Euclid's life, then the opposite is true of his book. The Elements was used as the primary geometry resource for over 2000 years, and his lessons could still be used today. Although it contains 13 volumes, much of the work may not be Euclid's. Some of the chapters seem to be written with different styles, and others are geared for different ages, leading one to believe that he inserted other mathematicians' work into his own.

Each volume begins with pages of definitions and postulates, followed by his theorems. Euclid then proves each one of his theorems using the definitions and postulates, mathematically proving even the most obvious. His work was translated into Latin and Arabic, and was first printed in mass quantity in 1482, ten years before Columbus, but 1800 years AFTER it was written! From that point until the early 1900's, The Elements was considered by far the best geometry textbook in the world.