LOGICAL PARTITION

Definition: <u>Logical partition</u> of a concept (term) C (*totum divisionis*) is a set of concepts (terms) A_1, A_2, …, A_n (members of partition, *membra divisionis*) which are subordinated to the concept C and:
    1. are pairwise mutually disjoint (exclusive) (*disjointedness condition*);
    2. and such that the union of their extensions is identical with the extension of the concept C (*adequacy condition*).

REMARK! The disjointedness condition (1) means that each referent (designatum) of a concept that is to be divided (*totum divisionis*), belongs to extension of at most one member of partition (*membra divisionis*), and the adequacy condition (2) means that each referent (designatum) of a concept that is to be divided (*totum divisionis*), belongs to extension of at least one member of partition (*membra divisionis*). Therefore, both those conditions together mean that each referent (designatum) of a concept that is to be divided (*totum divisionis*), belongs to extension of exactly one member of partition (*membra divisionis*).

<u>Examples:</u>
Dividing all triangles (P) into right ones (A_1) and isosceles ones (A_2) is neither disjointed (there are triangles that are right and have exactly two sides of equal length so are isosceles as well; they are both A_1 and A_2) nor adequate (there are for instance acute triangles with all sides of different lengths; they are neither A_1 nor A_2).

Dividing all triangles (P) into right ones (A_1), acute ones (A_2), obtuse ones (A_3) and isosceles ones (A_4) is adequate, but it is not disjointed (because, for example, there are right triangles with two equal sides; they are both A_1 and A_4).

Dividing all triangles (P) into right ones (A_1) and acute ones (A_2) is disjointed, but it is not adequate (because there are also obtuse triangles, which are neither A_1 nor A_2).

Dividing all triangles (P) into right ones (A_1), acute ones (A_2) and obtuse ones (A_3) is disjointed and adequate, and thus it is a logical partition of concept "triangle".