

Chapter II

Some Admissible Sets

Having gained some feeling for the theory KPU we turn to its intended models, admissible sets. Admissible sets come in many sizes and shapes. In this chapter the student is introduced to some of the more attractive ones in a cursory fashion. We will delve into their structure and properties later.

1. The Definition of Admissible Set and Admissible Ordinal

It facilitates matters if we fix a largest possible universe of sets over an arbitrary collection M of urelements once and for all. We define by recursion:

$$V_M(0) = 0;$$

$$V_M(\alpha + 1) = \text{Power set of } (M \cup V_M(\alpha));$$

$$V_M(\lambda) = \bigcup_{\alpha < \lambda} V_M(\alpha), \text{ if } \lambda \text{ is a limit; and}$$

$$V_M = \bigcup_{\alpha} V_M(\alpha),$$

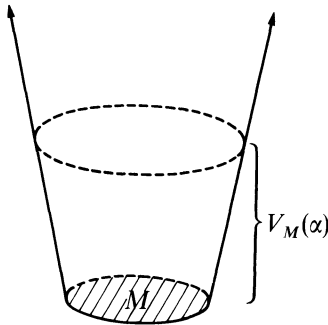


Fig. 1A. The universe V_M of sets on M