

**NUMBER SENSE IN ELEMENTARY SCHOOL CHILDREN: THE USES AND MEANINGS
GIVEN TO NUMBERS IN DIFFERENT INVESTIGATIVE SITUATIONS**

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To make children numerate is one of the main goals of mathematics education. Research on number sense can help to achieve this goal, particularly those with elementary school children. Number sense refers to the general understanding of numbers, their properties and relations, their uses and meanings in a variety of everyday situations. This research has investigated number sense in 2nd grade Brazilian children (7-8 years) from different social backgrounds. Three studies were conducted. Study 1 consisted of observations within the family context (without interference from the examiner). The aim of this study was to examine the different types of activities performed by the children which involved mathematics. Study 2 consisted of an interview that aimed to identify the general uses given to numbers by children in everyday life situations. Study 3 consisted of a multiple choice task in which participants were asked to make judgments about numerical situations involving both numbers and measurement, and to provide justifications for their responses. The observations made in the family context (Study 1) showed that recreational activities with numbers and situations requiring measurements were the most frequent. The children often had to count (e.g. points during a game), and often had to measure the length of objects (e.g. the height of a wardrobe) or the distance between them. The uses given to numbers in the interview (Study 2) were classified into different types: intellectual nature (e.g. to become intelligent), school uses (e.g. to do homework, to get good marks) and extra-school uses (e.g. to buy things, to know who is the tallest). It was noticed that children tend to give school-related uses to numbers, whereas they tend to give extra-school uses to measurement. The data derived from the multiple choice task (Study 3) were analyzed according to correct responses and the types of justifications given. These expressed different levels of number sense. All three studies have shown that there are some differences between children belonging to different social backgrounds. On the whole, the children presented number sense which teachers need to be aware of, and which needs to be taken into account in the school setting. Based on the results found, this research discusses the implications of this intuitive knowledge to mathematics education in the early years of elementary school.