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**The teacher's role in students' mathematics investigations. (O trabalho do professor numa aula de investigação matemática.)**

Quadrante 7, No. 2, 41-70 (1998).

This study, undertaken by a collaborative team of teachers and researchers, aimed to characterize the roles of the teacher in classes in which students are involved in doing mathematical investigations and to point out the most relevant aspects of the required professional knowledge. The methodology is qualitative, based in the observation of classroom situations concerning a task that may be approached from different perspectives and with several degrees of mathematical sophistication. Data collection was carried through video and audio recordings and observation notes. Several episodes were selected for an in-depth analysis. The study stresses six fundamental roles of the teacher in a class when students are doing this kind of work. One, is thinking mathematically in front of the students, and follows from the open nature of the task. Two other roles, to provide information and to promote reflection, are related to two dimensions of the curriculum, the general objectives and the specific content topics and procedures. And, finally three other roles, challenge, support, and evaluate, follow from the logic of the development of any activity. The study also points to several aspects of the teacher's professional knowledge, namely mathematical knowledge, in special related to the task, and didactical knowledge, concerning the organization of the work and the direction of the students' activity. (Orig.)

*Classification:* C60

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