



Questão 1. No texto *Understanding and Overcoming “Disadvantage” in Learning Mathematics*, Lulu Healy e Arthur B. Powell citam, na p. 73, uma pesquisa de Gutierrez (2007), que sugere três critérios para alcançar e medir a equidade na Educação Matemática.

Gutiérrez's (2007) point was that attitudes and practices in mathematics education that align with dominant perspectives of who can and does mathematics lead to inequity. She proposed a way to define equity that implies how both to achieve and to measure it. Borrowing from D'Ambrosio's (1999) trivium – literacy, matheracy, and technoracy – and illustrating with data from a high school that supports Latina and Latino students' participation in calculus courses while enabling them to maintain their linguistic and cultural identities, she posits three criteria for achieving and measuring equity in mathematics education:

1. *Being unable to predict students' mathematics achievement and participation based solely upon characteristics such as race, class, ethnicity, gender, beliefs, and proficiency in the dominant language.*
2. *Being unable to predict students' ability to analyze, reason about, and especially critique knowledge and events in the world as a result of mathematical practice, based solely upon characteristics such as race, class, ethnicity, gender, beliefs, and proficiency in the dominant language.*
3. *An erasure of inequities between people, mathematics, and the globe.*

Comente a interpretação dos autores desses três critérios, comparando com a sua visão sobre eles.

Questão 2. No texto *Firmar a posição como professor, afirmar a profissão docente*, o prof. António Nóvoa lança a seguinte pergunta (p. 1113): Como é que uma pessoa aprende a ser, a sentir, a agir, a conhecer e a intervir como professor?

- (a) Como você responderia essa pergunta? Considere as três situações destacadas no texto por Nóvoa.
- (b) Compare o modo como Nóvoa interpreta a teoria de Shulman (p. 1114) com a descrição mais detalhada dessa teoria, apresentada (a partir da p. 996) no artigo *O Lugar da Matemática na Licenciatura em Matemática*, de Plínio Cavalcanti Moreira e Ana Cristina Ferreira.

Questão 3. O artigo *From static to dynamic mathematics: historical and representational perspectives*, Luis Moreno-Armella, Stephen J. Hegedus e James J. Kaput comentam a transição de um estado de pensamento simbólico em Matemática com mídia estática, para uma forma dinâmica de representação.

Explique como os autores entendem a aplicação da Teoria de Representações Semióticas de Duval (2006) nesse processo, a partir do seguinte trecho:

As Duval (2006) has argued, “One has only to look at the history of the development of mathematics, to see that the development of semiotic representations was an essential condition for the development of mathematical thought. For a start, there is the fact that the possibility of treatment, for example calculation, depends on the representation system”.

Later, Duval explains that the crucial problem of mathematical comprehension for learners arises from the fact that the access to a mathematical object is possible only by means of semiotic representations and that these representations cannot be confused with the object itself. He refers to this problem as “the cognitive paradox of access to knowledge of [mathematical] objects.” The importance of studying some mathematical developments from a historical viewpoint becomes tangible by following the line of reasoning of Duval. In this paper, we argue that with the advance of dynamic media, the accessibility of mathematical ideas, the nature of symbolization, and the development of reference fields are transformed. (p. 102).