

**PROGRAM OF MATHEMATICS TEST ACCESS AND ENTRY IN HIGHER EDUCATION FOR  
OVER 23 YEARS, AT UFP**

**General Objectives:**

1. Understand some basic concepts and concepts of mathematics.
2. Take advantage of the logical, methodical, and organized nature of mathematics.
3. Create or strengthen sustained bases for the future assimilation of higher-level mathematics knowledge.

**Programmatic Content:**

1. Sets and ranges of real numbers.
  - 1.1. Sets
  - 1.2. Representation in the real line.
2. Equations and equalities
  - 2.1. Equations or equalities.
  - 2.2. Inequalities
3. Functions and equations.
  - 3.1. Linear functions and equations.
    - 3.1.1. Linear equations.
    - 3.1.2. Functions.
  - 3.2. Real variable real function domains and zeros.
    - 3.2.1. Domain of a function.
    - 3.2.2. Zero of a function.
  - 3.3. Polynomials functions and quadratic functions.
  - 3.4. Decomposition of polynomials.
  - 3.5. Exponential and logarithmic functions.
    - 3.5.1. Exponential function.
    - 3.5.2. Logarithmic function.

**Bibliography:**

- Ayres, F. & Mendelson, E. (2000). *Cálculo*. Edições McGraw-Hill (Schaum's easy outlines). ISBN 972-773-091-4. (Cota da biblioteca da UFP: CDU 517.2).
- Lages, D. J. S. & Lages, M. A. (1998). *Funções 1 - Matemática 10ºano — Fichas resolvidas*. Edições Silabo. ISBN: 978-972-618-175-0.
- Larson, R., Hostetler, R.P. & Edwards, B. H. (2006). *Cálculo – Volume 1*. Edições McGraw Hill. ISBN: 978-858-680-456-4 (Cota da biblioteca da UFP: CDU 517).
- Safier, F. (2003). *Teorias e problemas do pré-cálculo*. Coleção Schaum, Bookman. ISBN: 853-630-181-3 (Cota da biblioteca da UFP: CDU 517 510.22 519.879).
- Schmidt, P.A. & Ayres, F. (2006). *Teoria e problemas de matemática para ensino superior*. Coleção Schaum, Bookman. ISBN: 853-630-340-9. (Cota da biblioteca da UFP: CDU 51).