

REINFORCEMENT ACTIVITIES

Subject: Mathematics

Grade: 11°

Period: II

Year: 2019

SUGGESTION

Each period, the teacher formulates a problematizing question or situation related to the learning goals that help the student to train him/herself and get ready to prove his/her knowledge and proficiency levels in each area. This process is scheduled for the week of May 20 to 24. The student should consult the bibliographic references cited by the teacher and turn in three academic products for the period written with basic standards to give account for the skills acquired.

1. Problematizing question:

What aspects of daily life could be modeled by infinite processes such as successions and limits?

2. Learning Goals

I am able to calculate limits using different mathematical models and I identify successions by applying formulas to determine the n th value.

3. Academic products

- Concept of succession
- Arithmetic progression and geometric progression
- Concept of limit
- Infinite limits, Indeterminate and special.
- Permutations

4. Bibliographic references

<https://www.youtube.com/watch?v=h9IEAU5-CSg> : Limits

<https://www.youtube.com/watch?v=nTRDGKKBbow>

Notes made in class.

NOTE: Remember that: the delivery of the workshop should be done with cover APA standards, in addition to annexing this document with the proposed exercises.

1. Calculate the nth term of the following Successions:

a. 2,20,200

b. -4,9,-16,25,-36...

2. Find the general term of the following sequence, do the demonstration of such expression:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181, 6765, 10946, 17711, 28657, 46368, 75025, 121393, 196418, 317811, ...

3. Solve the following permutation:

With 10 micro-soccer players. How many ways can a 5-player team be available if the front center and the goalkeeper are always the same?

4. Solve the next limit

$$\lim_{x \rightarrow 64} \left(\frac{x - 64}{\sqrt{x} - 8} \right)^{e^{i\pi+0}}$$

5. Taking into account the concepts developed in class on the limits and processes of factoring, solve:

$$\lim_{x \rightarrow 2} \left(\frac{x^4 - 16}{x^3 - 8} \right)^{e^{i\pi+0}}$$