

REINFORCEMENT ACTIVITIES

Subject: Mathematics

Grade: 10º

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:

How do I formulate and solve problems of daily life whose solution requires the use and application of trigonometric ratios?

2. Learning Goals

Solve application problems in real life where's involve angles and trigonometric functions.

3. Academic products

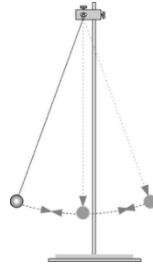
- Solve application problems in real life where's involve angles and trigonometric functions.
- Trigonometric ratios.
- Trigonometric ratios applications.
- Right triangle- Pythagoras theorem
- Counting techniques, Permutations, combinations, tree diagrams.

4. Bibliographic references

- <https://www.youtube.com/watch?v=E8LAqMbr7BM>
- <https://www.youtube.com/watch?v=rQSugLrhn7E>
- 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. Solve the following exercise using the three-rule composite:
To assemble a 30cm wide and 40cm long puzzle, 120 tiles are needed. How many tiles will be needed if we want to put together a puzzle that is 50cm wide and 100cm long?
2. What length travels the tip of a 10 cm timer from 3:00 am to 3:20 am?
3. Calculate the equivalence in degrees, minutes and seconds of:
 - a. 6 rad
 - b. 1 rad
4. From a point P on the terminal side of an angle x it is known that it is 13 units away from the origin and that its component in "y" is -12. Calculate the trigonometric functions for x.
5. The figure shows a pendulum composed of a sphere of mass m joined to a light string of length L. If the sphere is released from rest, the string forms an angle x with the vertical. When reaching the lowest part, the mass carries a speed given by the formula:



$$V = \sqrt{2gL(1 - \cos x)}, \text{ donde } g=9,8\text{m/s}^2$$

- a. Calculate the speed of a 2m long pendulum when the mass is dropped at a 30° angle
- b. Repeat the exercise when the angles are 45° and 60°