



COLEGIO NACIONES UNIDAS I.E.D.
TALLER PREPARATORIO
I TRIMESTRE
MATEMÁTICAS 501°

This workshop must be copied and solved in the mathematics notebook, as a requirement to take the competency test.

DELIVERY DATE: APRIL 2nd - 2024

Empowerment is It is a mathematical operation consisting of the product of several equal factors. That is, multiplying a number by itself as many times as indicated.

Potential has two numerical components called base and exponent.

Perform the operations and mark the correct answer on the answer sheet:

1 ¿How to Write the following product as potency?

$$3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$$

2 Find the product of the power a 10^{10}

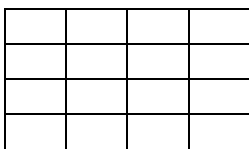
3. How to read the following power 11^3

4 Solve the following problem using the boost.

A builder has built 10 aparten towers, in each tower there are 10 floors and on each floor, there are 10 balconies.

5. Solves using Empowerment.

Look at the floor of my dining room, it's made up of square tiles, If I want to paint them all a different color each, ¿how many tiles will I have to paint?



6. a store receives 3^2 boxes of chewing gum, in each box there are 4^3 packs with 5 pieces of gum in each. ¿How many pieces of gum are there in total?

7. In the cellar of a gymnasium, they have stored 7^3 colored balls, if they want to distribute them in two classes of 6^2 . ¿How many correspond to each student?

8 in a restaurant there are 7 tables and at each table 7 diners. ¿How many people are in the restaurant?

9 In the video game, the number of tests to be passed in each level is double that of $\sqrt{\quad}$ the previous level. If there are 2 tests at level 1, ¿how many will there be at level 9?

10 The root of 144 is a number that is multiplied by itself 2 times.

11 solve the problem using radiation.

A bricklayer wants to place 121 tiles in a square room. ¿How many tiles will he have to place on each side?

12 324 trees have been brought to a gardener to plant in a square garden. ¿Will they be able to put all the trees?

13 Analizyes the exercises, observe the sing and add them up.

$$-6+9-3=$$

$$15-5+2=$$

$$2-10+8-4=$$

$$-6-12+6+12=$$

$$-20+40=$$

14. solve the following problem:

The temperature that a mountaineer registers at ground level, before starting to climb the mountain, is 19 degrees Celsius. When he reaches the peak, he makes a new record and finds that it has dropped to 26 degrees Celsius. Then, he descends a few meters, and the temperature rises 2 degrees Celsius. ¿ What temperature is the climber recording in his last measurement??

15? A submarine that studies marine fauna is 100 meters below the sea surface, immediately rises 40, and descends again 75, rises 30, continues rising 20, falls 25, rises 80 and finally falls 100. ¿At what depth is it? in the end

16. At 8 am the temperature is -3°C , after four hours it decreased 4°C . ¿What is the final temperature?

17. ¿What is the final temperature, if the initial temperature is 6°C and it decreases 8°C ?

18. ¿ If the temperature in Canada is -20°C and drops 3°C , what temperature is it?

19. thermometers at two different locations read -7°C and 12°C respectively. How many degrees of difference are there between the two places?

20. Express the following situations with integers

The temperature is 12 degrees below zero.

Five meters above sea level

Forty meters below sea level.

21. Daniel lives on the third floor and to go to his friend's house in the same building, Daniel must go down 4 floors.

22. A submarine is 45 meters below sea level, descends 50 meters, and then 76 meters more. ¿How deep are the submarine now?

23. The thermometer reads -3°C . What temperature will it show if it drops 5°C further?

24. A diver is submerged at -24 meters above sea level and climbs at a speed of 3 meters per minute. How deep will it be after 5 minutes?

25. ¿How do you read the following logarithm?

Logarithm $_3 9$

26. The result the logarithm: Logarithm $_3$ de 27 as:

27. The result the logarithm: Logarithm $_7$ de 48 is:

28. The result the logarithm: Logarithm $_2$ de 32 is:

29. The result of the logarithm: \log_8 of 64 is:

30. The result of the logarithm: \log_5 de 125 is:

