

THE MATH CHALLENGES: SOLVING MATH PROBLEMS AND PUZZLES

Description

This activity requires you to solve a series of math puzzles and problems, engaging in an enjoyable mathematical adventure while keeping your mind active. It is possible to complete this activity individually or in a small group, according to your preferences.



Time Needed

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Learning Setting

Individual or in group activity

Materials Required

- The problems/puzzles printed on paper, pens/pencils
- For the online version, you will need a laptop, tablet, or smart phone

Learning Objectives



Solving math problems, quizzes and riddles promotes cognitive health and keeps the brain active.

The specific learning objectives of this activity are:

- To maintain and improve numerical skills, including basic arithmetic and mathematical reasoning.
- To enhance problem-solving abilities, which are necessary to deal with challenges in daily life.
- To improve critical thinking, logical reasoning, and analytical thinking skills.
- To improve memory

Step By Step Guidance

1. Decide whether to do this activity individually or in a small group
2. The offline version requires printing out the problems/puzzles and solving them on paper, while the online version requires a laptop, tablet, or smart phone.
3. Identify the problems/puzzles you want to solve. Problems/puzzles are arranged by difficulty level, with the easier starting first.
4. Solve the problems/puzzles using reasoning.
5. You can then check your answers.
6. If the activity is completed in a group, you can share your reasoning and strategies used to solve the problem.



Practical Tips

- Choose or tailor problems/puzzles so that their complexity fits the participants' abilities and preferences to ensure an enjoyable and beneficial experience.
- It is also possible to do the activity individually but simultaneously with others. After everyone finishes, you can share the results and discuss your reasoning and strategies.
- To make the activity more challenging you can set a time limit of 1 or 2 minutes based on the difficulty of the problem.
- Calculators can be used for mathematical operations if necessary.
- When the problems become too difficult, you can stop.

Expected Results

It is expected that this activity will result in:

- Maintain and improve numerical skills, including basic arithmetic and mathematical reasoning.
- Enhancement of problem-solving skills
- Improvements in critical thinking, logical reasoning, and analytical thinking.
- Improve memory.
- Boost self-esteem and confidence by providing a sense of accomplishment.
- If math problems are solved in a group, collaboration, teamwork, and a sense of community can be fostered. It is possible to share strategies and insights, creating a supportive learning environment.

Source

CSI

MATHEMATICAL PROBLEMS AND PUZZLES

1. How many months are there in a year?

2. If the day after tomorrow is a Sunday, what day is it today?

3. 65 people are in a train wagon. 15 people are going down at the first stop, and 22 are getting up at the next. What is the number of passengers left on the train?

4. If three people can paint three rooms in three hours, how long will it take for one person to paint one room?

5. Ms. Kate had seven daughters. Each of his daughters has a brother. How many children does Ms. Kate have?

6. A train travels at a speed of 60 kilometers per hour. How far will it travel in 3.5 hours?

7. If Maria is twice as old as John, and the sum of their ages is 63, how old is each of them?

8. Can you solve this equation by using three of these symbols? $+ - \times \div$
 $2 ? 3 ? 6 ? 2 = 15$

9. A box contains 12 red balls, 18 green balls, and 10 blue balls. What is the probability of randomly selecting a blue ball?

10. A recipe requires $\frac{2}{3}$ cup of sugar. If you want to make 1.5 times the recipe, how much sugar do you need?

11. If a shirt is on sale for 25% off and costs €30 after the discount, what was the original price?

12. The sum of five consecutive even numbers is 120. What are the numbers?

ANSWERS SHEET

Problem	Answer
1	12 months
2	It's Friday (or any day two days before Sunday)
3	72 people
4	3 hours (Each person can paint one room in three hours)
5	8 children
6	210 kilometers
7	Maria is 42 years old, and John is 21 years old
8	$2+3 \times 6 \div 2 = 15$
9	1/4 (There are a total of 40 balls, and 10 of them are blue)
10	You will need 1 cup of sugar
11	The original price was €40
12	The numbers are 22, 24, 26, 28, and 30