



PUZZLING CARTOON

- MY DAUGHTERS' AGES -



Educational Goals

- ❖ Develop logic
- ❖ Highlight the playful potential of mathematics
- ❖ Develop numerical strategies using the factorization of natural numbers in different ways
- ❖ Raise consciousness about implicit constraints

Key Features of the Targeted Competency

- ❖ To define the elements of the mathematical situation
- ❖ To mobilize and apply concepts and processes appropriate to the given situation
- ❖ To justify actions or statements by referring to mathematical concepts and processes

Concepts Used

- ❖ Arithmetic (multiplication and addition)
- ❖ Factorization of natural numbers

Materials

- ❖ Video of the puzzle
- ❖ Sheets of paper
- ❖ Pencils
- ❖ Written copies of the puzzle (optional)

Targeted Academic Levels
Grades 7 to 11

Mathematical Field Concerned



Suggested Teaching Formula



Time Required
Approximately 25 minutes



SUGGESTED PROCESS



Step 1: Introduction (3 minutes)

Present the video of the puzzle a first time (www.amazingmaths.ulaval.ca).

A written version of the puzzle is available via the Explanation Sheet. If you believe it is necessary, you can project it or distribute copies to your students.

Present the video a second time to allow the students to thoroughly understand the information.

Step 2: Finding the solution (17 minutes)

Place the students in pairs so they can try to find the solution. Encourage the students to write down all the elements of information given by the affirmations.

To guide their thought process, you can draw their attention towards what these affirmations could mean: “the sum of their ages cannot help you” or “my eldest is named Marie”. To help them find the products of 36, you can advise them to place the factors in ascending order, also reminding them to check that they do not repeat themselves.

Step 3: Reveal the solution (5 minutes)

Refer to the Explanation Sheet for the puzzle “My Daughters’ Ages”.