PUZZLING CARTOON

- 10 COINS -

Educational Goals

❖ Develop logic

❖ Highlight the playful potential of mathematics

❖ Perform a sharing considering the given information

Key Features of the Targeted Competency

❖ To define the elements of the mathematical situation

❖ To mobilize and apply mathematical concepts and processes appropriate to the given situation

❖ To justify actions or statements by referring to mathematical concepts and processes

Concepts Used

❖ Arithmetic (addition and substraction)

❖ Counting

❖ Division

❖ Money handling

Materials

❖ Video of the puzzle

❖ Sheets of paper

❖ Pencils

❖ Written copies of the puzzle (optional)

❖ Appendix 1

Targeted Academic Level
Grades 3-4

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.

Give appendix 1 so they can cut out the coins of the puzzle and handle them while searching for the solution. Encourage them to do the sharing of the money by themselves. Children have to discuss together in order to exchange and agree on the solution.

To guide their thought process, ask the following questions:
  ➢ How many coins does Uncle Bob have in total? (10 coins.)
  ➢ Do the three friends receive the same amount? (Yes.)
  ➢ Do all the children receive the same number of coins? (Yes.)

Step 3: Reveal the solution (5 minutes)

The whole class together, ask a few teams to explain their reasoning to the rest of the class. When a few teams have explained their solution, explain the one given in the Explanation Sheet. Compare the Sheet's procedure to the students'.

Appendix 1

$1 $1 $1 $1 $1 $2
$2 $2 $2 $2 $2

$1 $1 $1 $1 $1 $2
$2 $2 $2 $2 $2

$1 $1 $1 $1 $1 $2
$2 $2 $2 $2 $2