PUZZLING CARTOON
- FRAGILE PARCELS -

Educational Goals

- Develop logic
- Highlight the playful potential of mathematics
- Work on the decision-making process, the planification and the anticipation of consequences

Key Features of the Targeted Competency

- To decode the elements that lend to a treatment
- To elaborate a mathematical solution
- To validate the solution
- To share the information relative to the solution

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 Formulas

Time Required
20 minutes

SUGGESTED PROCESS

Step 1: Introduction (2 minutes)

Play the video of the puzzle a first time.

A written version of the puzzle is included in the appendix of this document. If you believe it is necessary, you can project it or distribute copies to your students.

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

Step 2: Finding the solution (15 minutes)

Ask the students to find a solution, individually or in pairs.

To modelize the situation, the students may use pencils to represent the parcels and notebooks to represent the three shelves.

Step 3: Reveal the solution (3 minutes)

To move all the parcels in a minimum of operations, we will have to place the biggest parcel on the top shelf as soon as possible, since it is the one that will be at the bottom of the pile. So, we first have to think about the best way to move the two smallest parcels to the middle shelf.

Here is how to do it:

Place the smallest parcel on the top shelf, then the medium parcel on the middle shelf. Move the smallest parcel on top of the medium parcel, which is on the middle shelf. Then, take the biggest parcel and place it on the top shelf. We have a first parcel well placed. Place the smallest parcel on the bottom shelf. Then, place the medium parcel on the biggest parcel, which is on the top shelf. Finally, move the smallest parcel on top.

To go further…

How many operations, minimum, would be necessary if there were 4 parcels to move?

The answer is 15 operations.