



Math Game

- The Operations Ladder -



Educational Goals

- ❖ Highlight the playful potential of mathematics
- ❖ Increase the amount of additions and subtractions memorized

Key Features of the Targeted Competencies

- ❖ To mobilize mathematical concepts and processes appropriate to the situation (C2)
- ❖ To apply mathematical processes appropriate to the situation (C2)
- ❖ To interpret or produce messages of mathematical nature (C3)

Concept Used

- ❖ Arithmetic (addition, subtraction)

Materials

- ❖ Appendix 1
- ❖ Deck of cards
- ❖ Pencil
- ❖ Sheet of paper

Targeted Academic Level



Targeted Competencies



Mathematical Field Concerned



Suggested Teaching Formula



Time Required
15 to 25 minutes



Suggested Process



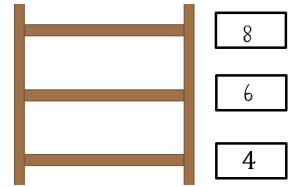
Step 1: Introduction

The Operations Ladder is played with two players. The students can play against each other or as a team. Explain the rules to the students, then provide them with Appendix 1 and a deck of cards. Distribute one sheet of paper and one pencil per person.

N.B. It is recommended to have laminated Appendix 1 beforehand to be able to change the numbers between each game.

Step 2: The game (15 to 25 minutes)

At the beginning of the game, the teacher writes a different number in every square of Appendix 1 (in the order he wants). For example, for the lowest rung, he may have written the number 4 in the square on the right, then have written the number 6 in the square above, and so on up to the last ladder's rung. Then, the students must climb the rungs of the ladder one at a time by finding a pair of cards which sum or difference equals the value written in the square. Because the students use a deck of cards, the maximum number the teacher can write in a square is 26 since the king's value is 13 ($13 + 13 = 26$).



The game is played by two students who play against each other. They each draw 6 cards from the deck (depending on the students' level and the numbers chosen by the teacher, the face cards can be removed from the deck). Player 1 has to find, among his 6 cards, 2 cards' values which sum or difference is equal to the number associated to the first rung of the ladder. If he has the cards, he states his operation and puts both cards on the rung. If he does not have the cards necessary in his hands, he draws, then plays if possible, or misses his turn if he still cannot play. It is now the 2nd player's turn. He repeats the same operations as player 1 and also has to try to reach the first rung.

Once a rung has been reached, the student who found the operation must reach the following one during the next turn. If the student does not reach the rung, he must try to reach it during the next turn.

At the beginning of every turn, the student must draw if he does not have a minimum of 6 cards in his hands, meaning if he placed two cards on a rung during the previous turn.

Variant

→ The students can also play this game as a team rather than against each other. Then, they must cooperate to reach the top of the ladder together.

Appendix 1

