CLAP AT 7

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Topic: Arithmetic and Patterns

People: More than 4 people (Grade 3 to Grade 5)

Material: A problem list (Appendix)

Description:

"Clap at 7" is not only a perfect game to enliven the atmosphere in a community (as the role of the ambiance of fireside) but an ideal mathematical problem that provides students and parents opportunities to explore the approaches and mathematical thoughts behind the problem.

Getting Started:

All participants sit around in a circle and the teacher/organizer gives a problem list to each participant.

- **Problem 1:** Warm-up – have participants get a general idea of the game rule and derive enjoyment from the game.

  Game Rule: Start counting from 1 to 80 but when you count to a number is a multiple of 7, then stop counting but clapping once.

  Question: How many times did we clap?

- **Problem 2:** Traditional version – have participants explore the harder version of the game and think about the pattern behind the game. Before counting and clapping, the organizer asks the participant to calculate or guess the times. Then they would the game

discover and testify the answer.

Game Rule: Start counting from 1 to 80 but when you count to a number is a multiple of 7 or contains the digit 7, then stop counting but clapping once.

Question: How many times will we clap?

- **Expansive Questions:** Have participants figure out the pattern among this game.

    Question: How many times will we clap from 1 to 80 if we:

    a. clap once when the number is a multiple of 7

    b. clap twice when the number contains the digit 7

    c. clap three times when the number is both a multiple of 7 and contains the digit 7.