Math Fact Fluency Background:

- Purpose: derived fact strategy game for multiplication and division
- Purposeful, frequent practice is needed for students to develop the fluency to progress to Phase 3 with all multiplication facts
- The key is to make practice through games as meaningful and strategy focused as possible.

About Games and Math Fact Fluency:

Games are fun. But, more importantly, games are effective ways to support *learning*. Games provide opportunities for:

- low-stress practice of (1) facts and (2) strategies (both outcomes are critical to math beyond the basic facts!).
- think aloud, an effective learning strategy. Therefore, students should develop the habit of verbalizing their mathematical thinking out loud.
- student listening and learning from peers. Therefore, discussing strategies before and after playing allows students opportunities to learn from each other.
- teachers to formatively assess and plan instruction. Therefore, at times, use an observation tool to record how students are progressing.

Effective math fact fluency games remove time pressure and allow students time to think. That means no time component. *Each* player has their own cards or dice to roll, so they are not racing each other. Scoring is de-emphasized. ***Thinking strategies are front and center.***

Multiplication Salute   3 players

Materials: **deck of playing cards with kings and jacks removed (ace =1, queen = 0)**, **score card**

Player 1	Player 2	Player 3

Multiplication Salute   Groups of 3

How to Play:

1. Determine which of the three will be the leader player for the first draw. This player takes the deck (face down) and hands each of the other two players a card.
2. Without looking at the card they were handed, the two players place their card on their forehead facing outward (so the others can see it).
3. Player says the product of the two cards.
4. The other two players determine the value of the card on their forehead, based on hearing product and seeing one factor.
5. Both players share how they determined their number. The player who was first to answer keeps the cards. Record the equation of the product on score card.
6. Rotate so that one of the other players is now the leader.
7. Continue until deck is gone.

Game in Action: Players take turns as the leader. Play until the board is full or deck is gone. Score points by having the faster player keep the cards.

The product is 0.

For example: In round 2, Player 2 deals a "Queen" to Player 1 and "8" to Player 3. Player 2 says the product "0". Player sees the "8" on Player 3, guesses a "Queen", and gets to keep cards. Player 3 guesses a "2".

Player 1	Player 2	Player 3
2 x 9 = 18	2	9 x 2 = 18
0	0 x 8 = 0	8 x 0 = 0

Possible Variations:

1. Use only designated cards, such as 1-5 and 10 to start, or jacks and queens as 11s and 12s to extend.

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