

## ACTIVITY IA7.5: Array Bingo

**Intended learning:** To develop facility with multiplication facts to  $9 \times 9$ .

**Instructional mode:** Longer, rehearsal mode for whole group or small groups.

**Materials:** One deck of array bingo cards per participant.

**Description:** Each participant selects 16 array bingo cards and places them face up in a 4 by 4 array on the desktop (see Figure 7.17). The leader announces one product at a time. If the student has an array or arrays equal to the announced product, the card(s) is turned face down. Play continues until a student has four cards in a row face down, either horizontally, vertically, or diagonally, and calls 'Array bingo!' The student must then verify each card by telling the fact represented by each card.

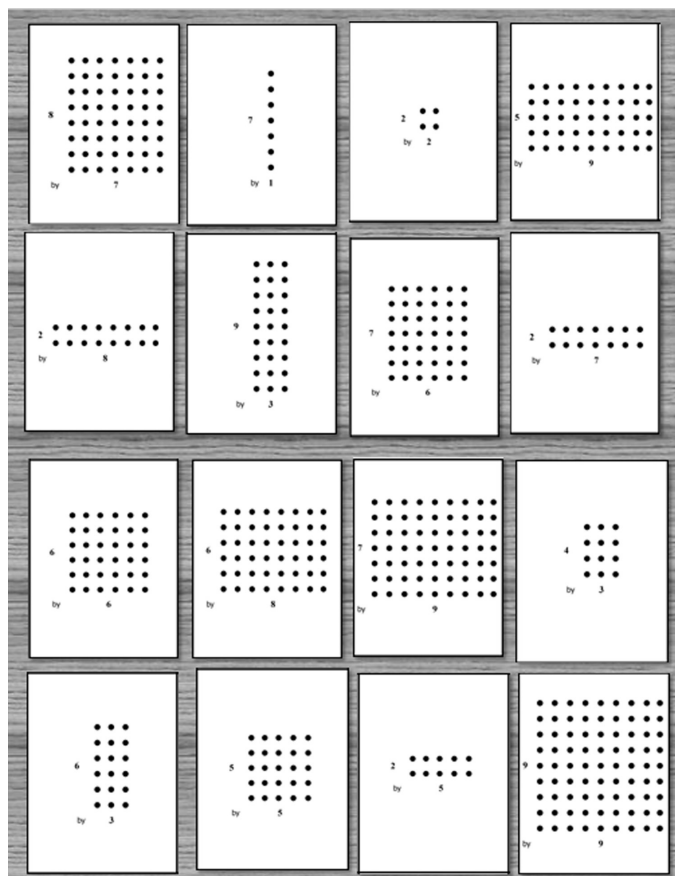


Figure 7.17 Array bingo cards

### Responses, variations and extensions:

- All announced products may focus on a specific concept unbeknownst to the students. For example, the leader might choose to announce multiples of 7, prime numbers, composite numbers, etc.
- After a student achieves array bingo, discuss the products that were announced. *What did you notice about these products? Yes, all of these arrays in this game were made of only a single row of dots. Why was that?* [They were all prime numbers.]
- For students who attempt to count the dots by ones, prompt with *Can you find a quicker way to find the product without counting by ones?* Students may suggest skip counting, or going from a known quantity. For example, to determine the product of 6 and 7, a student might use the square  $6 \times 6$  and count on one more group of 6.
- For less facile students, cards may be sorted to limit products to 25 dots.
- As students develop facility, cards with the bare number expressions ( $6 \times 4$ ) may be substituted for the arrays.
- Small group and partner variations include:
  - **Who has the Greater Product?:** Each partner turns over a card and determines the product of his or her array. There is no time limit. The individual with the greater product gets both cards. In the event of a tie (the product of each card is equal), each tying player flips over another card. The player with the greatest product on the new card, wins that turn and gets all the cards that are face-up. Play continues until one player has all the cards or until time has expired. In this case, the individual with the most cards wins the game.
  - **Product Race:** One card is flipped face up. The first partner to identify correctly the product gets the card. This game does have a time element. If an individual incorrectly identifies the product, that player is penalized one card. This discourages wild guesses that can imprint incorrect facts. The individual with the most cards wins.
  - **Go Fish for Products:** This game involves the traditional go fish rules except that the individual asks for an array of a specified product. In order to lay down a match, the individual must have two cards with the same product. The perfect squares are wild cards and can be matched to any product as long as both products are identified.

**Acknowledgement:** Activity modified from B. Kobett (1999), Professional Development Workshop for Grade 5 Teachers at Roye-Williams Elementary, Havre de Grace, Maryland. Used with permission.