

Strive to Derive

Materials:

- Array Cards (use arrays for 3s, 4s, 6s and 9s)
- Uncooked spaghetti or thin sticks
- Two teacher-labeled dice; one with 3, 3, 6, 6, 9, 9 and the other with 0, 1, 4, 6, 7, 8

Number of Players:

- 2-4 players

Instructions:

1. Spread the array cards out so they can be seen.
2. Players alternate taking a turn. Player 1 rolls the dice, then-
 - a) finds the array;
 - b) partitions that array (using uncooked spaghetti) into two arrays, one of them being a 2, 5, or 10 fact;
 - c) says or writes how to find the fact that he or she rolled.

Example:

Lisa rolls a 6 and a 7. She places spaghetti to show 5×7 and 1×7 . She then says, "Six times seven, thirty-five, and one more seven, forty-two."

Optional:

Student can record arrays: $6 \times 7 = 5 \times 7 + 7 = 42$.

3. If a player is able to illustrate and explain the fact using a derived fact, he or she scores a point.
4. The player returns the array card to the middle of the table. Play goes to the next player.
5. Play to ten points.