

## Dot to Dot Game – Using Ratio Tables to Determine Percent – Teacher Notes

### Essential Questions:

1. Are all percents proportional relationships?
2. How can using a ratio table help find solutions to proportional percent problems?

### Materials:

Dot to Dot Game for each pair

Markers or map colors

### Dot-to-Dot Game for finding percents

1. Ask the essential questions (posted on the front board) to the students. This will focus the activity that you will be doing today.
2. Model the Dot-to-Dot Game using 3 rows of six dots (10 squares) and how to figure the “stats” of the scores of the two players – figuring percentage of squares gained.
3. Emphasize how to “double” and “add” and “chunk” rows to generate equivalent ratios. Students play the game and figure “stats”. Their first board has 25 squares. The remaining boards will require the student get as close to 100% as possible to figure their “stats”.-- Encourage student conversation as the students discuss how to find their “stats”.

### Facilitation Questions:

- How is each row related in a ratio table?
- Do your ratio table rows have to have in order?
- Does the ratio table you used to find the percent each player received have to be the same as another student’s ratio table?

Here is one way each ratio table could be used to find the “stats” for each of the dot games.

# of Boxes	Percent
45	100
9	20
3	6 $\frac{2}{3}$
12	26 $\frac{2}{3}$
21	46 $\frac{2}{3}$
24	53 $\frac{1}{3}$

Player 1: 46  $\frac{2}{3}$ %

Player 2: 53  $\frac{1}{3}$ %

# of Boxes	Percent
12	100
6	50
3	25
9	75
1	8 $\frac{1}{3}$
7	58 $\frac{1}{3}$
5	41 $\frac{2}{3}$

Player 1: 58  $\frac{1}{3}$ %

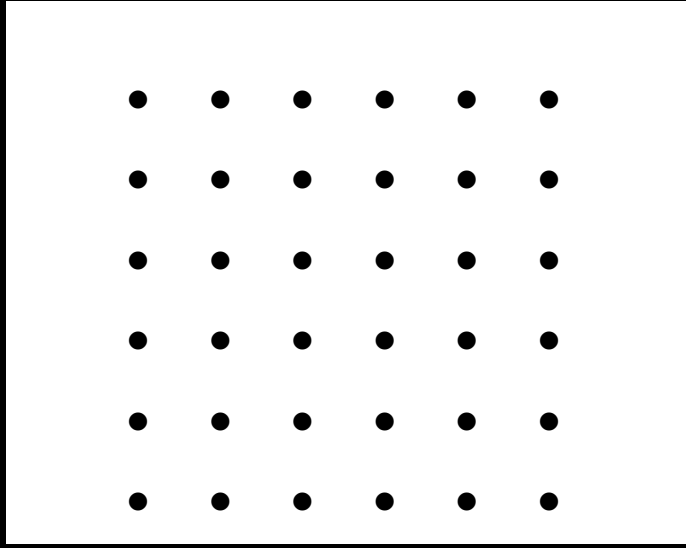
Player 2: 41  $\frac{2}{3}$ %

# of Boxes	Percent
30	100
3	10
6	20
12	40
24	80
9	30
21	70
18	60

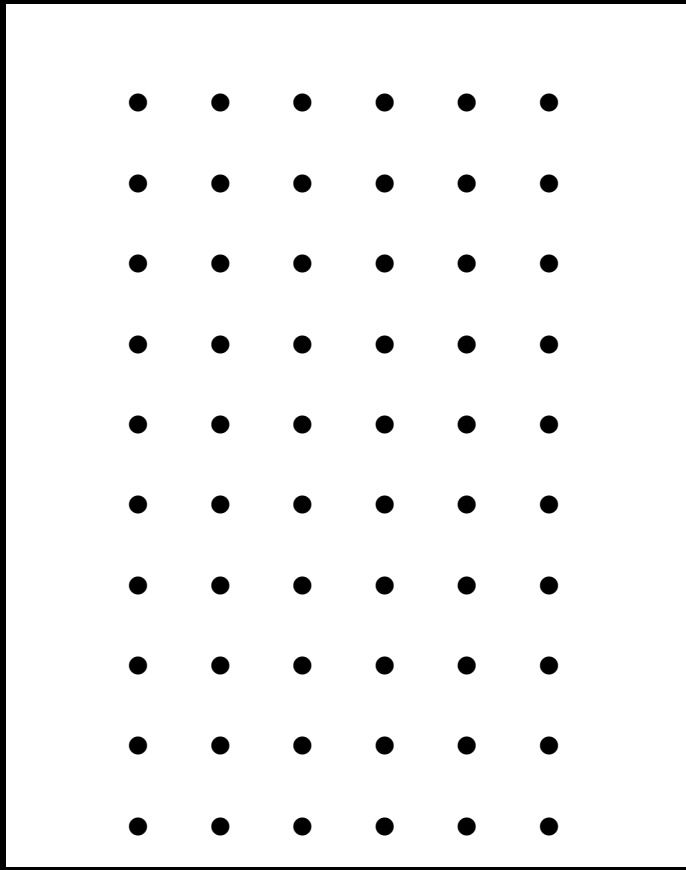
Player 1: 40%

Player 2: 60%

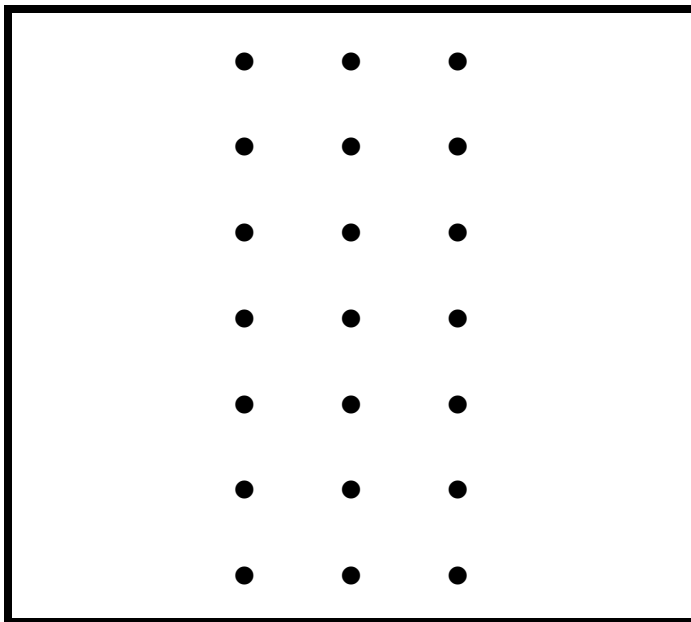
## Dot to Dot Game: Figuring the Stats

	# of Boxes	Percent
		

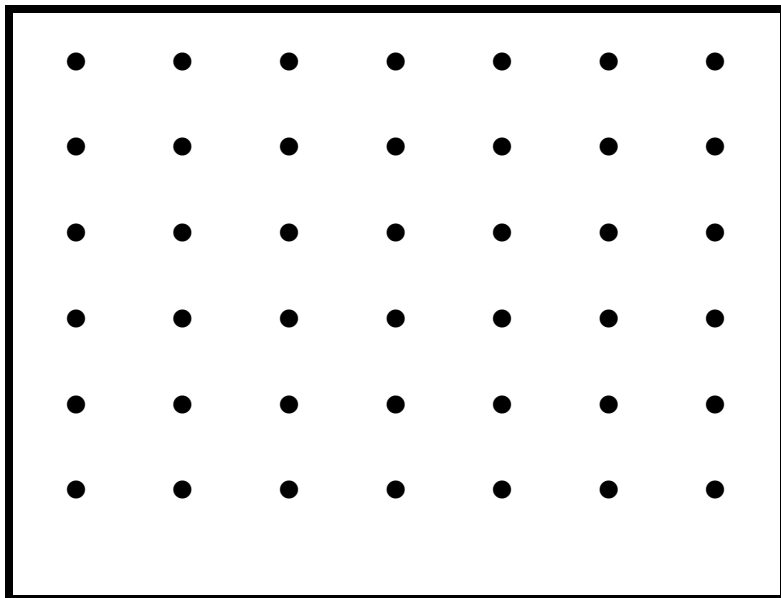
What percent of the boxes did each player win? Player #1 \_\_\_\_\_ Player #2 \_\_\_\_\_

	# of Boxes	Percent
		

What percent of the boxes did each player win? Player #1 \_\_\_\_\_ Player #2 \_\_\_\_\_

	# of Boxes	Percent

What percent of the boxes did each player win? Player #1 \_\_\_\_\_ Player #2 \_\_\_\_\_

	# of Boxes	Percent

What percent of the boxes did each player win? Player #1 \_\_\_\_\_ Player #2 \_\_\_\_\_