## Ratios Tables and Proportions with Blocks

Set 1: Build the structure below.


Duplicate your design as shown below.


Triple your design as shown below.


Complete the table below without building the $4^{\text {th }}$ or $10^{\text {th }}$ structures:

|  | $1^{\text {st }}$ Diagram | $2^{\text {nd }}$ Diagram | $3^{\text {rd }}$ Diagram | $4^{\text {th }}$ Diagram | $10^{\text {th }}$ Diagram |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Red Blocks |  |  |  |  |  |
| Blue Blocks |  |  |  |  |  |

Write the values above as fractions:

What do you notice?

Complete the table below without building the $4^{\text {th }}$ or $10^{\text {th }}$ structures:

|  | $1^{\text {st }}$ Diagram | $2^{\text {nd }}$ Diagram | $3^{\text {rd }}$ Diagram | $4^{\text {th }}$ Diagram | $10^{\text {th }}$ Diagram |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Blue Blocks |  |  |  |  |  |
| Total Blocks |  |  |  |  |  |

Write the values above as fractions:

Set 2: Build the structure below:


What is the ratio of red to yellow?

What is the ratio of orange to red?

Duplicate the structure to fill in the ratio table below.

|  | $1^{\text {st }}$ Diagram | $2^{\text {nd }}$ Diagram | $3^{\text {rd }}$ Diagram | $4^{\text {th }}$ Diagram | $10^{\text {th }}$ Diagram |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Orange <br> Blocks |  |  |  |  |  |
| Yellow <br> Blocks |  |  |  |  |  |

Write the equivalent ratios below:

Set 3: Create your own structure, draw a sketch below, and fill in the ratio table.

|  | $1^{\text {st }}$ Diagram | $2^{\text {nd }}$ Diagram | $3^{\text {rd }}$ Diagram | $4^{\text {th }}$ Diagram | $10^{\text {th }}$ Diagram |
| ---: | :--- | :--- | :--- | :--- | :--- |
| Blocks |  |  |  |  |  |
| Blocks |  |  |  |  |  |

Write a ratio of green blocks to purple blocks for each structure. Match the structures that are proportional (equal ratio of green blocks to purple blocks)

## Structure 1:



## Structure 3:



Structure 5:


Structure 7:


Structure $\qquad$ \& $\qquad$ are equal ratios.

Structure $\qquad$ \& $\qquad$ are equal ratios.

Structure 2:


Structure 4:


Structure 6:


Structure 8:


Structure $\qquad$ \& $\qquad$ are equal ratios.

Structure $\qquad$ \& $\qquad$ are equal ratios.

