Name $\qquad$ Date $\qquad$

## Master 10.7 Additional Activity 1: Cover Up

Work with a partner.
You will need a hundred chart and counters of 2 colours.
The game is played on a hundred chart.
> Player 1 chooses any even number and puts a counter on that number.
> Player 2 chooses any number that is either a multiple or a factor of Player 1's number, and places a different-coloured counter on that number.
> Players continue to take turns choosing numbers. A player can choose any uncovered number as long as it is a multiple or a factor of the previous chosen number.
$>$ The game continues until one player cannot cover a number. When this happens, the other player is the winner.

Take it Further:
Extend the game board, using a 200 chart.
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## Master 10.8 Additional Activity 2: Graph It

Work with a partner.
You will need Colour Tiles and 1-cm grid paper.
> The shapes below are made with Colour Tiles. Look for patterns in the area of each shape.


Frame 2


Frame 3


Frame 4
$>$ Determine the area of the Frame 5 and of the Frame 6.
> Create a table to organize your findings.
> Draw a graph to display your data.
> Explain how you could determine the area of the shape in any frame using either a table of values or a graph.

## Take it Further:

Create your own growing area pattern.
Complete a matching table.
Have a classmate graph your pattern on 1-cm grid paper.

Name $\qquad$ Date $\qquad$

## Master 10.9 Additional Activity 3: Win with Less

Work with a partner.
You will need Pattern Blocks, a paper bag, and pencil and paper.
> Place an assortment of Pattern Blocks in a paper bag.
> Without looking, each player chooses 3 Pattern Blocks and places them together to form a new figure.
> The object of the game is to make a figure with the least perimeter.
> Count the number of sides on each of the new figures. The player with the least perimeter gets a point.
> The first person to score 10 points wins the game.

Take it Further:
Repeat the activity with each player choosing 4,5, or 6 Pattern Blocks from the bag.
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## Master 10.10 Additional Activity 4: Painted Patterns

Work with a partner.
You will need different coloured Snap Cubes, a pencil, and a sheet of paper. Use Snap Cubes to model a growing cube pattern.
$>$ Begin with a 2 by 2 by 2 cube structure.
Imagine that the cube has been dipped in paint.
Try to figure out how many Snap Cubes would have 3 painted faces, 2 painted faces, 1 painted face, or no painted face.
> Use a table. Record the frame number, the number of cubes with only 3 painted faces, the number of cubes with only 2 painted faces, the number of cubes with only 1 face painted, and the number of cubes with no face painted.
> Continue to build cube structures.
> You may want to use one colour to represent the Snap Cubes with 1 face painted, another colour to represent the Snap Cubes with 2 faces painted, and a third colour to represent Snap Cubes with 3 faces painted.
> Continue to record your data in the table.
> Look for patterns in the table.
> Describe any patterns that you see.

## Take it Further:

Try the activity for rectangular prisms.

