The Pattern Block Fraction Game
(adapted from VDOE Pattern Block Fraction Game)

Need: gameboard, pattern blocks, cubes or spinners with the numbers 1, 1/2, 1/3, 1/3, 1/6, 1/6 written on each face or section

Version 1:

Objectives: represent fractions with pattern blocks, use fraction language and connect it to the symbolic and concrete representations, understand the number of fractional pieces that it takes to make a whole.

Directions: Each player needs a gameboard. Roll cube. Take the pattern block piece that represents that fraction (the hexagon is always a whole), name it and place it on one of the hexagon "frames" on the gameboard. Each time students add a piece to their gameboard they can tell what fractional part of that hexagon is covered. Once you've started filling in a hexagon with a particular color it must be filled in with all the same color. Toward the end of the game, if you roll a fraction and can't use it, you lose that turn. The winner is the first to fill all the hexagons on the gameboard.

Version 2:

Objectives: represent fractions with pattern blocks, use fraction language and connect it to the symbolic and concrete representations, understand that different fractional pieces can be combined to make a whole, but the fractional part retains its name, and (optional) write equations to show different ways fractional parts can be combined to make a whole (ex. 1/2 + 1/3 + 1/6 = 1)

Directions: Game is played same as above, except students can place different colored pieces on the same hexagon. After the game, students can be asked to write equations representing the fractional parts that make up each hexagon. Extension: Students can be asked to find all of the different ways to cover a hexagon.

Version 3:

Objectives: represent fractions with pattern blocks, use fraction language and connect it to the symbolic and concrete representations, trade for equivalent fractional parts to build up to six wholes.

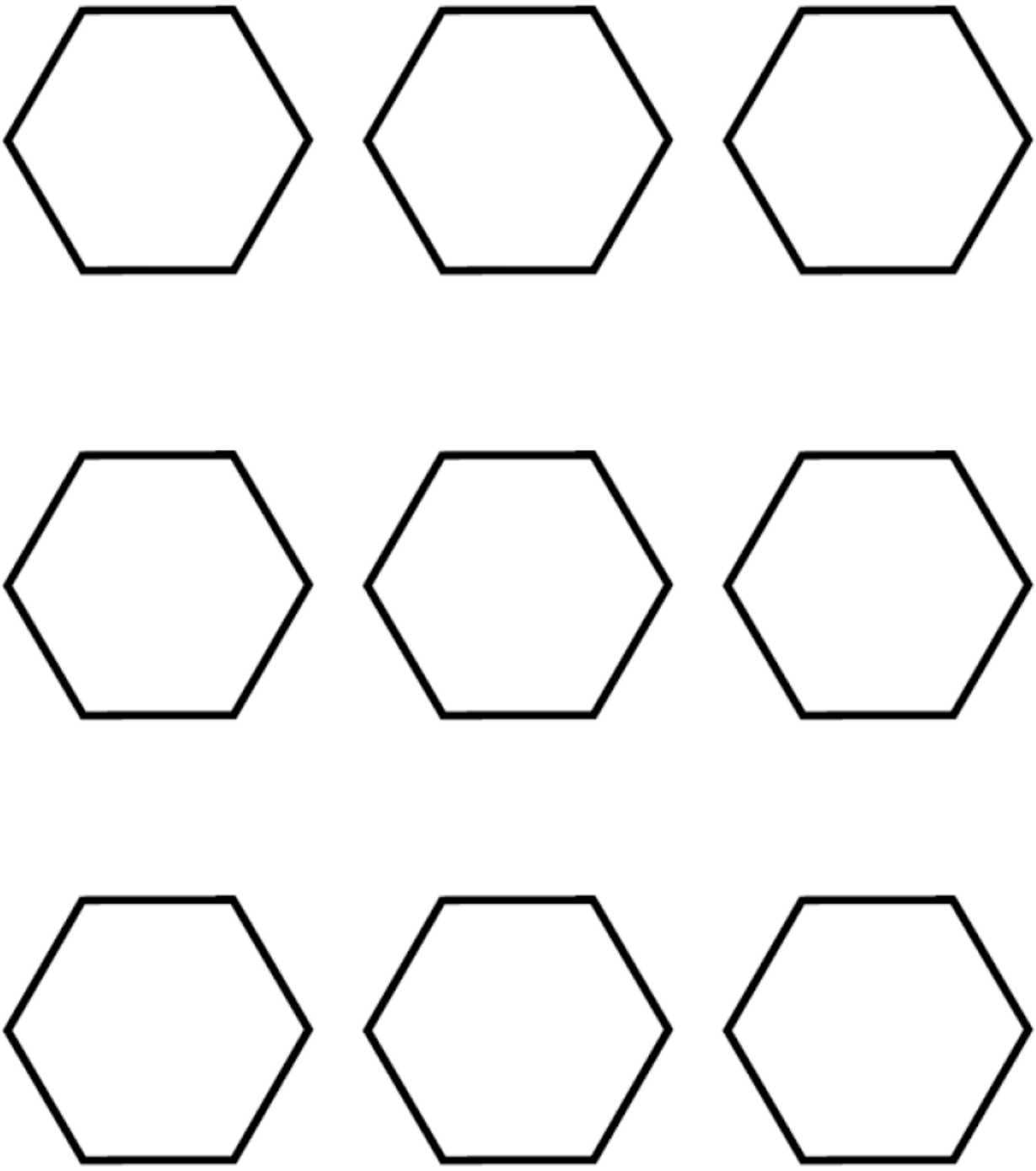
Directions: Game is played same as above, except students now work on building and finishing one hexagon at a time. If students roll 1/2 and have 1/6 left to fill on a hexagon, they can take 1/2 as 3/6 or as 1/6 and 1/3. Students can finish one hexagon and begin another on the same turn. After each turn, students can announce the total covered on the board (3 2/3). At the end of the game, students can be asked to write equations to match the hexagons on their game board.

Version 4:

Objectives: represent fractions with pattern blocks, use fraction language and connect it to the symbolic and concrete representations, trade for equivalent fractional parts to subtract from six wholes.

Directions: Game is played similarly to Version 3, except students start by covering the board with nine yellow hexagons. On each roll, students must subtract the fraction rolled. Students will trade for equivalent fractions as necessary. The winner is the first to remove all pieces from the board.

Pattern Block Fraction Game Board



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