

FRACTURED DOMINOS

Level	3 (Age group 11-14)
Resources Required	Dominoes (4 per player)
Alternate Options for the Resources	<p>Instead of dominoes, the teacher can make fraction cards. To make fraction cards:</p> <ul style="list-style-type: none"> • Cut out 42 pieces of paper about the size of your palm. • On each piece of paper, write a fraction that a 0-6 in the numerator and a 1-6 in the denominator. If each fraction is different, there will be 42 cards in total (See Images/Illustrations).
Strand Covered	Numbers and Operations
Targeted Skills	Comparing fractions and equivalent fractions
Inspired by	Julia Robinson Mathematics Festival - Gordon Hamilton
Time Required	20 mins (for game) 30 mins (setup)
Previous Learning Required	Knowledge of numbers 1-10 Knowledge of the definition of fraction, numerator, and denominator
Support Required	Low supervision

Rules of the Game:

Goal	The first player who plays all of their dominoes wins.
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Steps	<p>Step 1: The teacher groups players into groups of 3-4. Although this game is best with groups of 3-4, if there are leftover players, the teacher can make groups of 3-5.</p> <p>Step 2: The teacher removes and sets aside the 0 0 domino. From the remaining dominoes, the teacher gives each player 4 dominoes face down. players may look at the dominoes they are given but should not show any other players their dominoes.</p> <p>Step 3: Each group can begin the game once all of the materials have been handed out.</p> <p>Step 4: Each group decides who will go first. If groups have trouble deciding who should go first, the youngest person in the group goes first.</p> <p>Step 5: In a clockwise direction starting from the first player, players choose one of their dominoes to play face up.</p> <p>Step 6: The numbers on the domino represent the numerator and denominator of a fraction. The domino must be played so that the numerator is less than or equal to the denominator. A domino can only be played if its fraction is either larger than all previously played fractions or its fraction is equivalent to at least one of the other played fractions.</p> <p>Step 7: If a player cannot play any of their dominoes following the rules in Step 6, the player must pass their turn.</p> <p>Step 8: When all players in the group have either played one domino or have passed, the player who played the highest fraction removes all of the dominoes that were played and puts them aside (these dominoes will no longer be used during this game). This player is now the player who plays first.</p> <p>Step 9: Repeat Steps 5-8 until one player plays all of their dominoes. This player wins the game.</p>																																																																																				
Images or Illustrations	<p>Example of Fraction Cards:</p> <table border="1" data-bbox="742 1531 922 1869"><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>5</td><td>5</td><td>5</td><td>5</td><td>5</td><td>5</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>6</td><td>6</td><td>6</td><td>6</td><td>6</td><td>6</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>	0	0	0	0	0	0	1	2	3	4	5	6	1	1	1	1	1	1	1	2	3	4	5	6	2	2	2	2	2	2	1	2	3	4	5	6	3	3	3	3	3	3	1	2	3	4	5	6	4	4	4	4	4	4	1	2	3	4	5	6	5	5	5	5	5	5	1	2	3	4	5	6	6	6	6	6	6	6	1	2	3	4	5	6
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Enrichment	<ul style="list-style-type: none">• Have players play with more than 4 dominoes.• Have players play in groups larger than 5 players.• Allow players to choose which number on their domino is the numerator and which is the denominator. This will allow players to play with improper fractions.
Simplification	<ul style="list-style-type: none">• Have players play with only 2 or 3 dominoes.• Have players play in pairs.• Use dominoes that only include the numbers 0-4.