

LITTLE BIG FRACTIONS

Little Big Fractions is a fraction comparing game where the aim is to get a complete set of fractions in order from smallest to biggest.

It is a good game for developing an understanding of how large fractions are, as well as how to make fractions that are between other fractions in size.

Grade: 4th Grade and up

Number of players: 2+

Learning: Comparing fractions, ordering fractions, strategy

You will need

- 2 counters
- A game board for each player
- The Little Big Fraction Table or a calculator to help order the fractions correctly.

Instructions

- Player 1 places a counter on the numerator board and another one on the denominator board. They can choose which numbers to start with.
- Player 1 then decides where to record the fraction they have made. They can choose any of the 6 spaces on their Little Big Fraction Board.
- Player 2 then moves the numerator and denominator counters one space each along the line to make a new fraction. Player 2 then records the fraction anywhere on their board.
- This process is repeated for each player and then goes back to player 1 again.
- A fraction can only be recorded if it is in the correct size order, e.g. $\frac{2}{3}$ cannot be placed above $\frac{1}{2}$, and $\frac{3}{5}$ cannot be placed below $\frac{3}{4}$.
- Fractions which have the same value, e.g. $\frac{1}{2}$ and $\frac{2}{4}$ can be placed next to each other on the boards.
- If a player cannot place a fraction (either because it is too big or too small to go into a free space) then play passes to the next player.
- The first player to finish placing all 6 fractions correctly in size order is the winner.
- Either the Little Big Fractions Table or a calculator can be used to check whether or not a fraction is bigger or smaller than another fraction.

Variations

- Each player is only allowed to move either the numerator or the denominator, but not both counters.

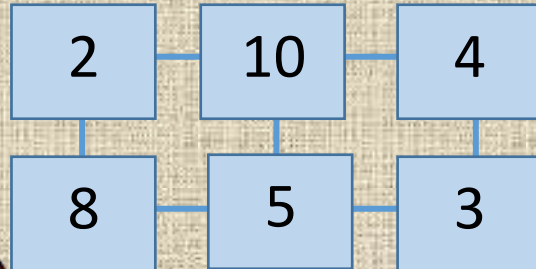
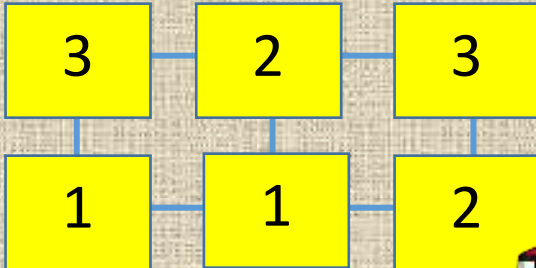
$\frac{4}{5}$

LITTLE BIG FRACTIONS

 $\frac{2}{3}$

Numerator

Denominator



LITTLE BIG FRACTIONS BOARD

1)

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SMALLEST

2)

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3)

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4)

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5)

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6)

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BIGGEST

LITTLE BIG FRACTIONS BOARD

1)

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SMALLEST

2)

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3)

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4)

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5)

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6)

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BIGGEST



LITTLE BIG FRACTIONS Table

- The table below shows the possible values of all the fractions in the game from smallest to largest (and equivalent decimal values).
- The highlighted fractions are equivalent and have the same value as each other.

| FRACTIONS IN INCREASING ORDER | SIMPLEST FORM | DECIMAL (TO 3DP) |
|----------------------------------|----------------|------------------|
| $\frac{1}{10}$ SMALLEST | $\frac{1}{10}$ | 0.1 |
| $\frac{1}{8}$ | $\frac{1}{8}$ | 0.125 |
| $\frac{1}{5}$ | $\frac{1}{5}$ | 0.2 |
| $\frac{2}{10}$ | $\frac{1}{5}$ | 0.2 |
| $\frac{1}{4}$ | $\frac{1}{4}$ | 0.25 |
| $\frac{2}{8}$ | $\frac{1}{4}$ | 0.25 |
| $\frac{3}{10}$ | $\frac{3}{10}$ | 0.3 |
| $\frac{1}{3}$ | $\frac{1}{3}$ | 0.333 |
| $\frac{3}{8}$ | $\frac{3}{8}$ | 0.375 |
| $\frac{2}{5}$ | $\frac{2}{5}$ | 0.4 |
| $\frac{1}{2}$ | $\frac{1}{2}$ | 0.5 |
| $\frac{2}{4}$ | $\frac{1}{2}$ | 0.5 |
| $\frac{3}{5}$ | $\frac{3}{5}$ | 0.6 |
| $\frac{2}{3}$ | $\frac{2}{3}$ | 0.667 |
| $\frac{3}{4}$ | $\frac{3}{4}$ | 0.75 |
| $\frac{2}{2}$ | 1 | 1 |
| $\frac{3}{3}$ | 1 | 1 |
| $\frac{3}{2}$ BIGGEST | $\frac{3}{2}$ | 1.5 |