

Sharing snakes

Teaching strategies for thinking about fractions

Best for

- Year level: 4–5
- Fraction construct: Division



Overview

Description	This activity is designed to support students to develop understanding of the fractions as division construct which is foundational in students' development of thinking about fractions. Through the activity, students can be supported to: • understand how whole numbers greater than one can be divided into fractional pieces to be shared evenly amongst a group • determine the relative size of fractions with different denominators.
Learning focus	Australian Curriculum: Years 4 and 5 Mathematics Number • find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation (AC9M4N03) • solve problems involving division, choosing efficient strategies and using digital tools where appropriate; interpret any remainder according to the context and express results as a whole number, decimal or fraction (AC9M5N07) General capability: Numeracy learning progression Number sense and algebra: Interpreting fractions • equivalence of fractions — creates fractions greater than one by recreating the whole (P5) • fractions as numbers — connects the concepts of fractions and division: a fraction is a quotient, or a division statement (P6) • comparing fractions — identifies a fraction as a rational number that has relative size (P7)
Teacher preparation	• Assemble required resources: – 3 chairs or tables – space to stand behind each chair/table – 6 lolly snakes or other snacks to share. (Consider dietary requirements.) Note: Only one set of resources is required as this is a whole class activity.

- Set up the classroom with three chairs at the front of the room: one chair with one snake, one chair with two snakes and one chair with three snakes.

Example: Activity set-up

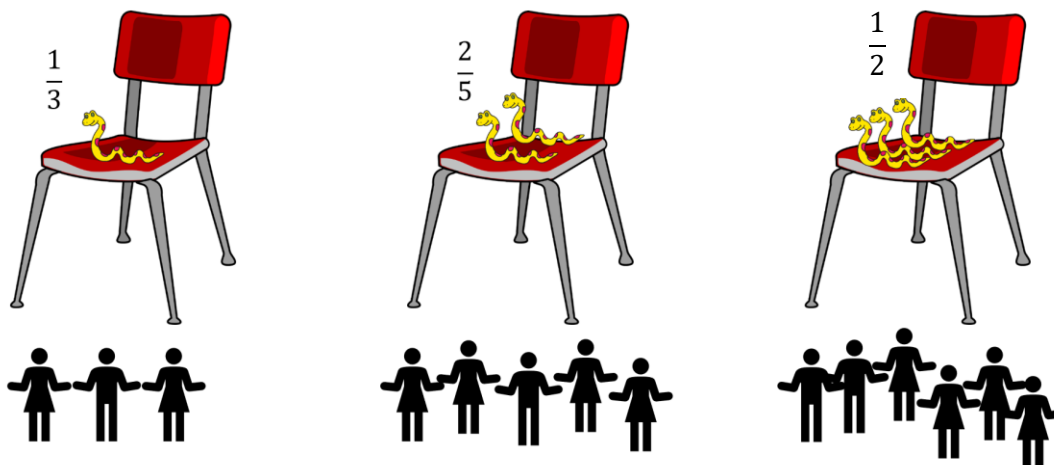


Suggested implementation

1. Explain to students that the purpose of the activity is to obtain the greatest amount of snakes. Students will be called to come up, one at a time, and stand behind the chair which will give them the greatest amount of snakes. If they join someone behind a chair, then the snakes on that chair must be divided evenly among all the students standing behind it.
2. Ask students to come up — when asked — and stand behind the chair that provides the opportunity to obtain the best share of the snakes.
3. As students move to a chair, they must tell the group how many whole snakes or what fraction of a snake they will receive, e.g. if two students are standing at the middle chair, each student will receive one snake each. However, if four people are standing at that chair, they will receive $\frac{1}{2}$ a snake each.

Prompt students with questions such as:

- a. What fraction of a snake will you get?
 - b. Is that the best place to stand?
 - c. Why did you choose that chair?
4. When all students are in position, ask students to calculate the final fraction of snake each person will receive. In the example below, students standing at the chair with 1 snake will receive $\frac{1}{3}$ each; those at the middle chair will receive $\frac{2}{5}$ each and those in front of the chair on the right will receive $\frac{1}{2}$ each.
 5. Ask the class to determine which chair ended up giving students the most amount of snake and by how much.



Variations

1. You can run the activity any number of times by changing the number of snakes you initially place on each of the chairs.
2. If desired, the activity can be adapted for small groups. Cut out the images provided in the template. Students can move images of the people to an image of the relevant chair.

Resource



[Sharing snakes template](#)

Print and cut out.

Reference

This activity is inspired by Clarke, D. (2011) Fractions as division: The forgotten notion?. In J. Way & J. Bobis (Eds.), *Fractions for teaching understanding* (pp. 33–41). Australian Association of Mathematics Teachers. https://primarystandards.aamt.edu.au/content/download/19933/273067/file/tdt_F_clarke2.pdf



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