

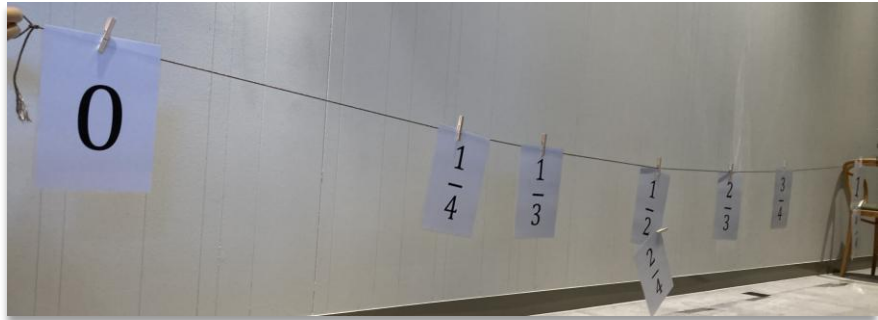
Best for

- Year level: 4
- Fraction construct: Measure



Overview

Description	This activity is designed to support students to develop understanding of the measure fraction construct which is foundational in students' development of thinking about fractions. Through the activity, students can be supported to understand: • how the size of the fraction changes depending on the numerator and denominator • the relative size of fractions, including equivalence • how fractions can be used to represent values less than one.
Learning focus	Australian Curriculum: Year 4 Mathematics Number • count by fractions including mixed numerals; locate and represent these fractions as numbers on number lines (AC9M4N04) • find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation (AC9M4N03) General capability: Numeracy learning progression Number sense and algebra: Interpreting fractions • equivalence of fractions — creates equivalent fractions by dividing the same-sized whole into different parts (P5) • equivalence of fractions — uses partitioning to establish relationships between fractions (P5) • fractions as numbers — justifies where to place fractions on a number line (P6) • fractions as numbers — uses and explains the equivalence of decimals to benchmark fractions (P6)
Teacher preparation	• Consider whether you would like students to complete the activity in small groups or as a class. • Assemble required resources: – rope to fit across the classroom space – a set of fraction cards. – at least 40 pegs.

	Resource
	 Walk the line fraction cards You may choose to only use a selection of these or create your own. • Prepare the classroom with rope strung across room. Ensure the height of the rope is low enough for all students to reach.
	Example: Activity in progress
	

Suggested implementation

1. Distribute the fraction cards.
2. Direct students to peg their card on the line (when asked).
 - a. Start by placing cards at 0 , $\frac{1}{2}$ and 1 .
 - b. Discuss how you might be able to approximate distances (e.g. length of stride).
3. Call students forward using directives such as: 'If you have a fraction with a three in the denominator, place your number on the number line'. Students may adjust their placements based on feedback from other students.
4. Conclude with a whole class discussion. Consider using the following questions to lead a discussion:
 - a. Who needed to peg their card in the same place as someone else?
 - b. How can we determine the accuracy of our placement?
 - c. Which reference points were the most useful?
 - d. Did anyone consider an equivalent fraction to help them place their card?
 - e. Is it possible for a placement to be reasonable, but not exact?
 - f. Could we extend the number line beyond one? What would this represent?

Variation

1. Have students choose different fractions and create their own cards to place on the number line.
2. This activity could be adapted for lower year levels by only using simple fractions, such as halves and quarters.
3. This activity could be adapted for higher year levels by incorporating more challenging fractions, such as sevenths and ninths.

References

This activity is inspired by:

Australian Association of Mathematics Teachers. (n.d.). *Sorting fractions cards slide presentation*, Top drawer teachers: Resources for teachers of mathematics.

<https://topdrawer.aamt.edu.au/Fractions/Downloads/Sorting-fractions-cards-slide-presentation>

YuMi Deadly Centre Faculty of Education. (2014). *YuMi Deadly Maths Year 4 Teacher Resource: NA – Walking the rope*. QUT. https://research.qut.edu.au/ycd/wp-content/uploads/sites/181/2017/12/YDM-CCP14_Year4_NA_Walking_the_rope.pdf



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