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## N001\_Enrichment: Exploring traditional fractions

Pages: Pre-requisite knowledge Textbook Content: The division symbol  $\div$  and the division operation must be understood before students can grasp fraction notation.

Learning Goal: Students recognize division symbols and understand basic division as "splitting into equal groups."

### **Explanation:**

Fractions have been part of Indian mathematics for over 3,000 years! The words we use for fractions today - like 'paav' for quarter, 'adhaa' for half, and 'saadhey' for "and a half" - come directly from ancient Sanskrit. When the Rig Veda mentioned 'tri-pada' for three-quarters, it literally meant "three feet" or "three parts."

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### **Examples from Real Life**

Your grandmother saying "saadhey teen baje" (3:30) or asking for "paune do kilo" ( $1\frac{3}{4}$  kg) of vegetables is using mathematics from the Vedic period! Different Indian languages kept these ancient fraction words alive:

- Hindi: 'teen paav' ( $\frac{3}{4}$ ), 'saadhey do' ( $2\frac{1}{2}$ )
- Tamil: 'mukkaal' ( $\frac{3}{4}$ ), 'kaal' ( $\frac{1}{4}$ )
- Telugu: 'mudu-kaalu' ( $\frac{3}{4}$ ) - literally "three parts"
- Bengali: 'saardhey' ( $\frac{1}{2}$ ), 'pouney' ( $\frac{3}{4}$ )

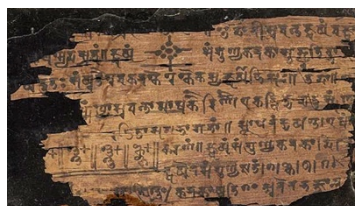
### **Image Ideas:**

- Split image showing ancient Sanskrit text and modern kitchen scene with grandmother measuring
- Map of India with different regional fraction words marked by state

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### **Historical Connection/ Special Box**

Ancient Indian mathematicians like Brahmagupta (628 CE) didn't just invent fraction calculations - they created a language system that survived thousands of years. The Bakshali manuscript (300 CE) shows fractions written almost exactly like we do today. These weren't just academic exercises - merchants used fractions for trade, architects for temple construction, and families for daily cooking.



**Your Turn:** Ask your family what fraction words they use. You might discover your kitchen is a living museum of ancient mathematics!