NCTM | NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

PREMIER MATH EDUCATION EVENTS

Based on *Principles to Actions: Ensuring Mathematical Success for All*

Dallas | February 5–6, 2016

Effective Teaching with *Principles to Actions*:

Implementing College- and Career-Readiness Standards

NCTM INTERACTIVE INSTITUTES

Grades PK–5 | Grades 6–8 | Grades 9–12 | School Leaders

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Align your classroom instruction to college- and career-ready standards in mathematics to meet the learning needs of all students.

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- Learn from experts in mathematics education.
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For more information visit nctm.org/institutes

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OCT 2015

teaching children mathematics

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volume 22 + number 3

features

138 Engaging Students with Multiple Models of Fractions
Xiaofen Zhang, M. A. (Ken) Clements, and Nerida F. Ellerton
Pouring water to create equal shares is just one of the multimodal activities in this collection, which is designed to assist elementary school students in gaining a rich understanding of unit fractions.

148 Iteration: Unit Fraction Knowledge and the French Fry Tasks
Reflect and Discuss
Ron Tzur and Jessica Hunt
Using these tasks can help nurture children's multiplicative notions of unit fractions beyond part-whole understanding.

158 Unwrapping Students' Ideas about Fractions
Rebecca M. Lewis, Lynsey K. Gibbons, Elham Kazemi, and Teresa Lind
Sandwiching formative assessment items and instruction can yield insight into why students use particular strategies or notation.

170 Units Matter
Ji Yeong I, Barbara J. Dougherty, and Zaur Berkaliev
The meat and potatoes of fraction multiplication is the change of units.

178 Unpacking the Division Interpretation of a Fraction
Rebecca C. Poon and Priscilla Eide Lewis
Chew on why 13/7 equals 13 ÷ 7 as we explore two classroom lessons that develop conceptual understanding by building on children's knowledge of whole-number division.

186 5 Indicators of Decimal Understandings
Reflect and Discuss
Kathleen Cramer, Debra Monson, Sue Ahrendt, Karen Colum, Bethann Wiley, and Terry Wyberg
Follow children who used grids and decimal +/– charts to taste the richness of Common Core decimal standards.

COVER: SHUTTERSTOCK/ELOVICH

N. F. ELLERTON

departments

125 news&views
2015 Focus Issue: Between the Wholes: Promoting Fraction and Decimal Understanding

127 problem solvers: problem
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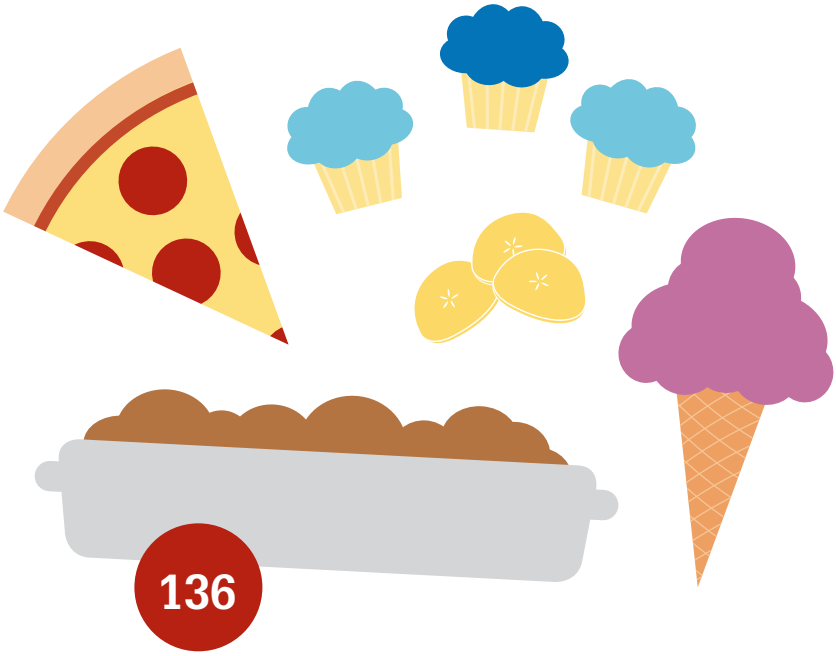
more4U

Appendix of word problems and directions for using the French Fry game online from "Iteration: Unit Fraction Knowledge and the French Fry Tasks," **p. 148**

remainders

169 call for manuscripts: Hot topics



in the next issue

+ The Common Core State Standards for Mathematics (CCSSM) require elementary school students to construct line plots and categorical data displays. "Royalty, Racing, Rolling Pigs, and Statistical Variability," by Randall E. Groth, shows how types of statistical variability recommended in the Guidelines for Assessment and Instruction in Statistics Education (GAISE) can be taught alongside the data displays required by CCSSM.