



Decoding the Language of the TEKS
&
Interpreting the Mathematics in the TEKS

(K-5 TEKS Breakout Session)



Fall Meeting – October 21, 2013

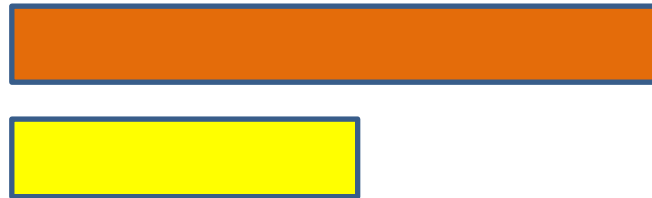


TEKS 3.3.C

The student is expected to explain that the unit fraction $1/b$ represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero whole number.



Which Cuisenaire Rod pairs can be used to represent the unit fraction $\frac{1}{2}$?



Explanation

The length of the yellow rod is $\frac{1}{2}$ the length of the orange rod.

The length of the orange rod is 2 times the length of the yellow rod.



Which Cuisenaire Rod pairs can be used to represent each of the unit fractions:

$1/1$, $1/2$, $1/3$, $1/4$, $1/5$, $1/6$, $1/7$, $1/8$, $1/9$, $1/10$?





Discussion Questions

- How do you know that you have found all the representations for each of the fractions explored?
- Why are some unit fractions represented by fewer rod pairs than others?
- How can this exercise help students gain a deep understanding of unit fractions?



Why are unit fractions
emphasized in the revised TEKS?



TEKS 3.3.D

The student is expected to compose and decompose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts $1/b$.



TEKS 4.3.A

The student is expected to represent a fraction a/b as a sum of fractions $1/b$, where a and b are whole numbers and $b > 0$, including when $a > b$.



TEKS 5.3.J

The student is expected to represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as $1/3 \div 7$ and $7 \div 1/3$ using objects and pictorial models, including area models.



Division of a Whole Number by a Unit Fraction:

Richard has 3 pizzas. If Richard gives each of his friends $\frac{1}{2}$ of a pizza, how many of his friends would receive $\frac{1}{2}$ of a pizza?



Division of a Unit Fraction by a Whole Number:

Two cyclists, Anne and Carolyn, are on a trip. Carolyn has $\frac{1}{4}$ gallon of water. If this water is shared equally between the two of them, what fraction of a gallon will each of them have?



TEKS 5.3.L

The student is expected to divide whole numbers by unit fractions and unit fractions by whole numbers.



Terms and TEKS

Grades K,1,2	Grades 3,4,5

Which terms in the revised TEKS are new to these grade levels?

Indicate the revised TEKS next to each term.



Terms of the TEKS

- Which mathematics terms would your teachers have trouble explaining?
- How will you support teachers in transitioning to this new mathematical language?



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