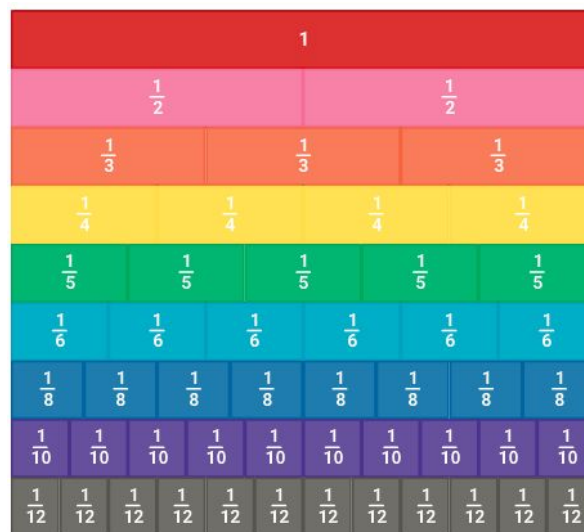


What to expect in Math-Fourth Grade



Math Mornings
December 4, 2018
8:45-9:30

Josh Rosen and Cathy
O'Rourke

Fourth graders will...

Expand their understanding of place value to 1,000,000 and learn strategies for solving multi-digit multiplication and division problems...

34×28

	20	8
30	600	240
4	80	32

$+ \begin{array}{r} 32 \\ 80 \\ 240 \\ \hline 600 \end{array}$

$2 \overline{)68}$

$\begin{array}{r} 34 \\ 2 \overline{)68} \\ -6 \\ \hline 08 \\ -8 \\ \hline 0 \end{array}$

$72 \div 4 = 18$

$4 \times 1 = 4$
 $4 \times 2 = 8$

$\begin{array}{c} (72) \\ \swarrow \quad \searrow \\ (40) \quad (32) \\ \left(\frac{40}{4} \div 4 \right) \quad \left(\frac{32}{4} \div 4 \right) \\ = 10 \quad + \quad = 2 = 18 \end{array}$

Word Problems-Take a close look

What is similar and what is different?

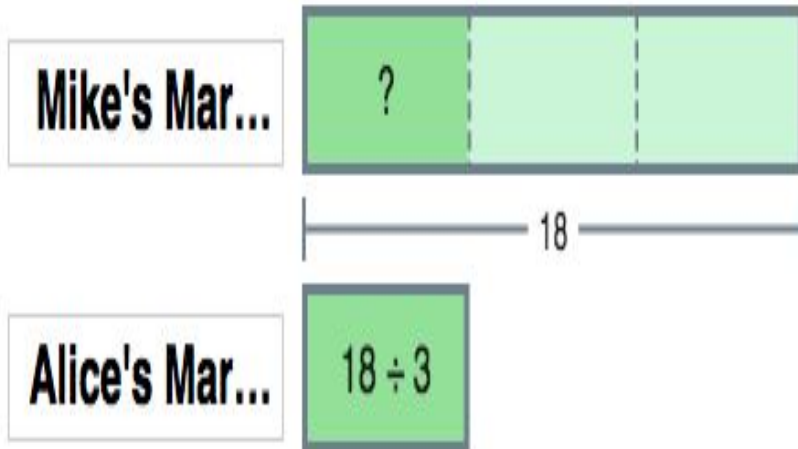
Mike has 18 marbles.
His friend Alice has three times as many marbles as Mike. How many marbles does Alice have?

Mike has 18 marbles.
He has three times as many marbles as his friend Alice. How many marbles does Alice have?

Problem 1



Problem 2

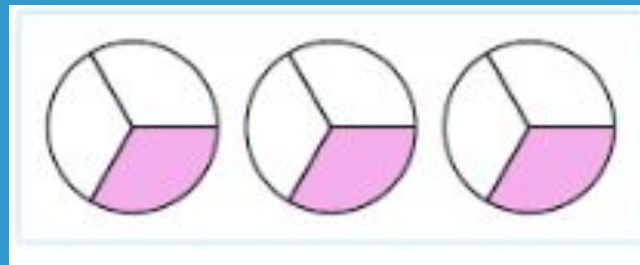


and...

develop a deep understanding of equivalent fractions, and learn to decompose fractions as they learn to multiply a whole number by a fraction..



$$\frac{1}{3} \times 3 = \frac{3}{3} = 1$$



Let's Compare Fractions!!

Order these fractions from smallest to largest:

$\frac{3}{4}$ $\frac{3}{5}$ $\frac{7}{8}$ $\frac{1}{3}$

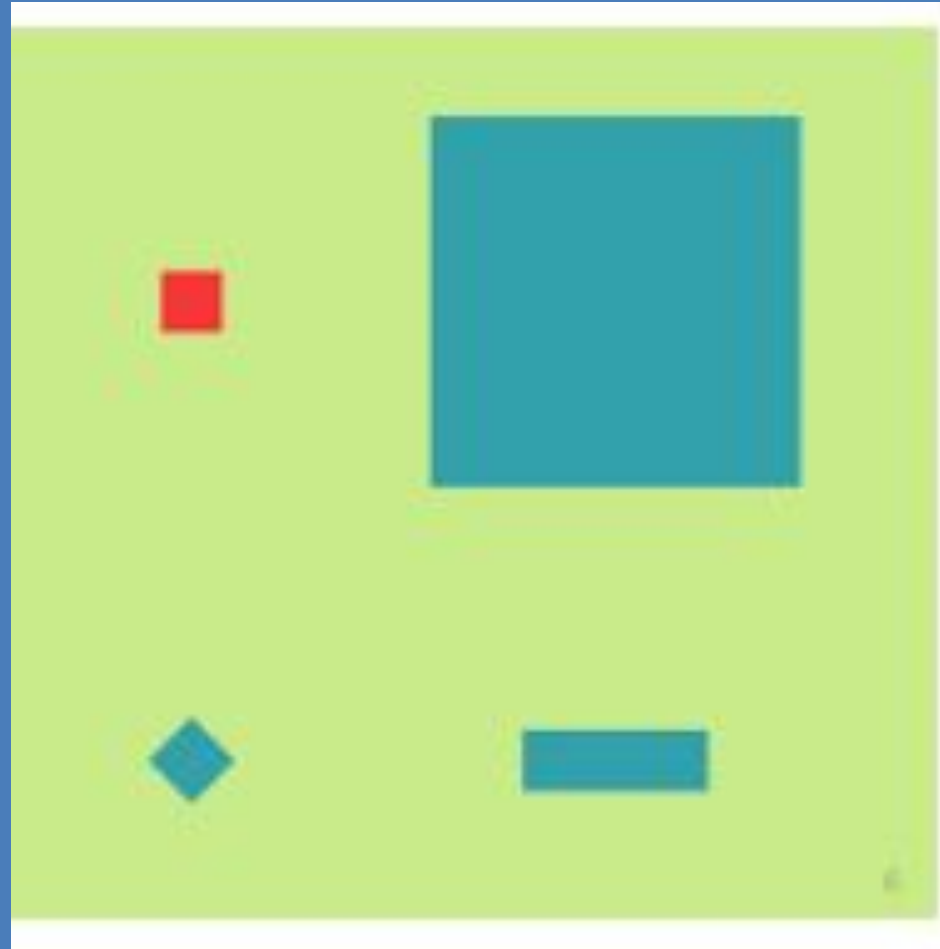
What do you visualize?

and...

...describe, analyze, and classify two-dimensional shapes as they deepen their understanding of the properties of shapes.... (parallel and perpendicular lines, angles, sides, etc.)

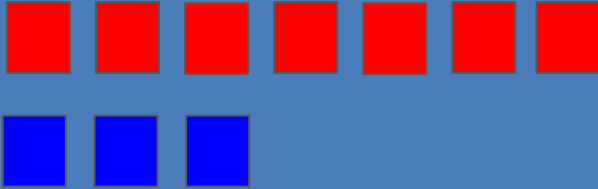
Which one doesn't belong?

by Christopher Danielson



Some theory to guide us--

Concrete



A concrete representation of the equation 7+3=10. It consists of two rows of colored blocks. The top row contains seven red blocks, and the bottom row contains three blue blocks. The word "Concrete" is written in orange to the left of the blocks.

Pictorial



A pictorial representation of the equation 7+3=10. It features a ten-frame, which is a rectangle divided into two equal halves. Above the left half is the number 7, and above the right half is the number 3. The word "Pictorial" is written in red to the left of the ten-frame.

Abstract

$7+3=10$

An abstract representation of the equation 7+3=10. The word "Abstract" is written in purple to the left of the equation. The equation itself, $7+3=10$, is written in green.



Jerome Bruner's
learning theory

What do vibrant mathematics classrooms look like?

Students feeling comfortable taking risks

Students collaborating

Teachers encouraging perseverance

Students justifying their ideas and listening to the ideas of others

Teachers encouraging a wide range of possible methods for solving problems

Ways to support Math Learning at Home

Mathematize your World!!--Notice math in everyday life

Play Math Games like Salute, solve puzzles like KenKen

Be positive about math! Your attitudes have a big impact!

Dreambox

Math Resources:

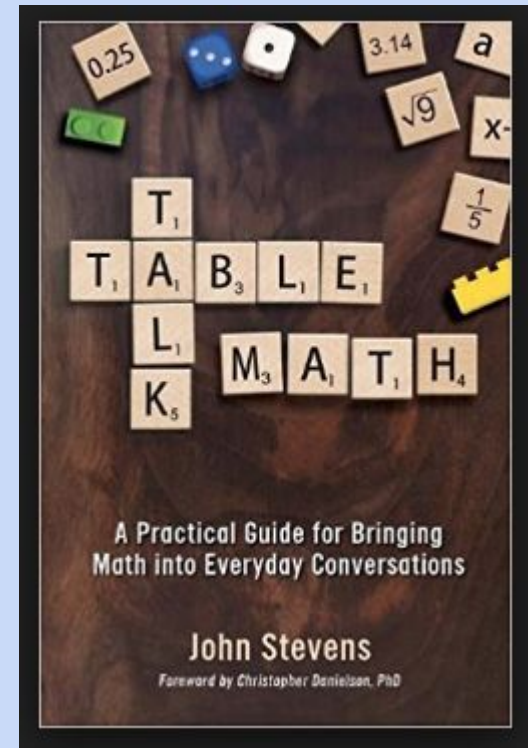
- *Go to Springhurst Website

- *Click on Academics Tab

- *Click on Math Resources

You will find a wealth of resources to better understand the math we are doing in school!!

Other Resources



bedtimemath.org

Thank you for coming!!

rosenj@dfsd.org

For Math Resources, go to

<https://www.dfsd.org/domain/275>