



**The
Flexibility
Formula**



PREK - 2ND GRADE

Understanding Versus Doing Math

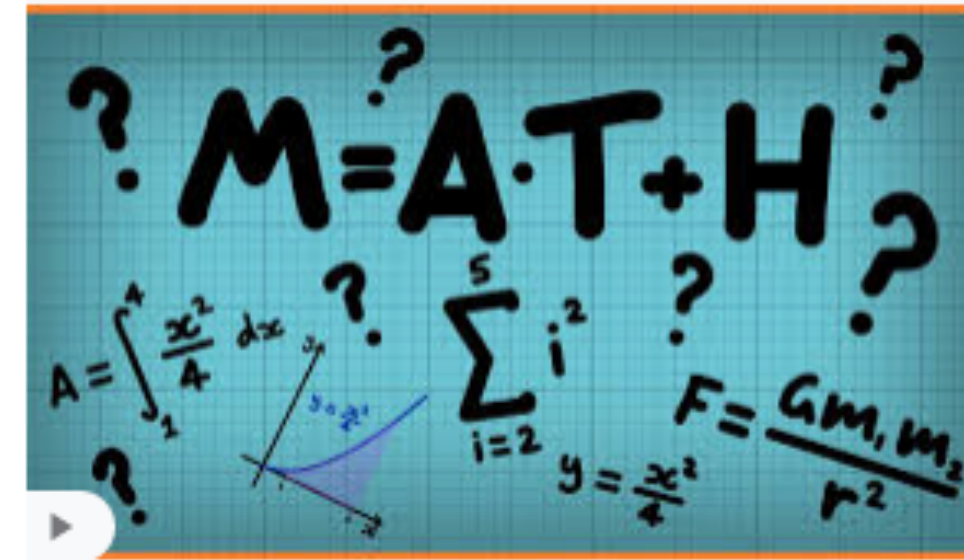
@BuildMathMinds



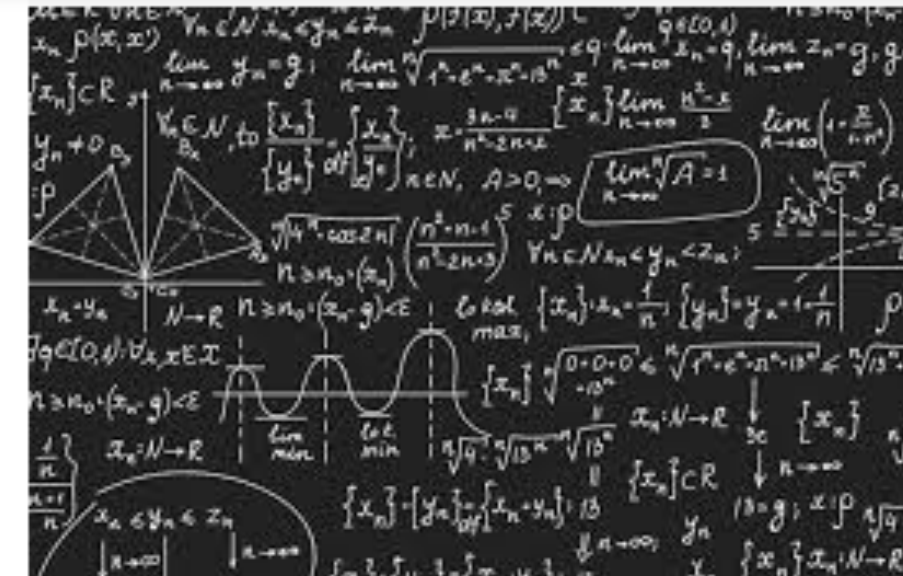
math



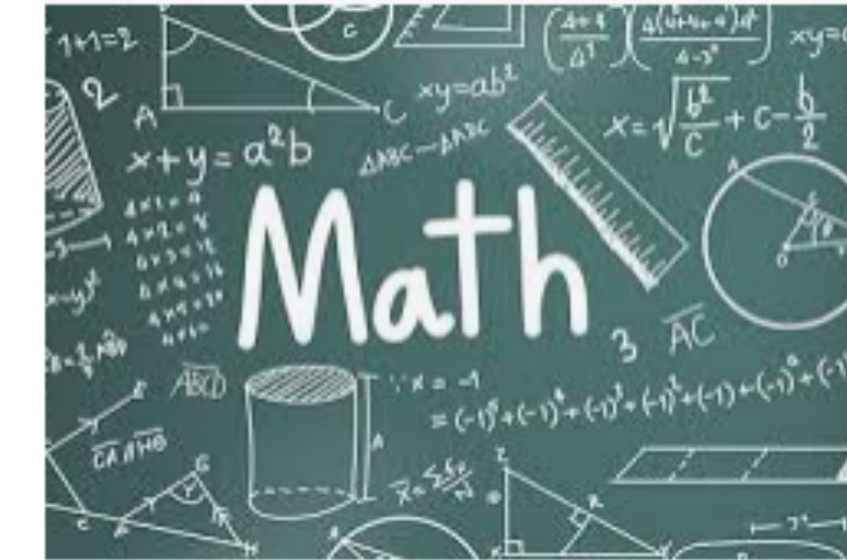
What is Mathematics? | Liv...
livescience.com



How to Read Math - YouTube
youtube.com



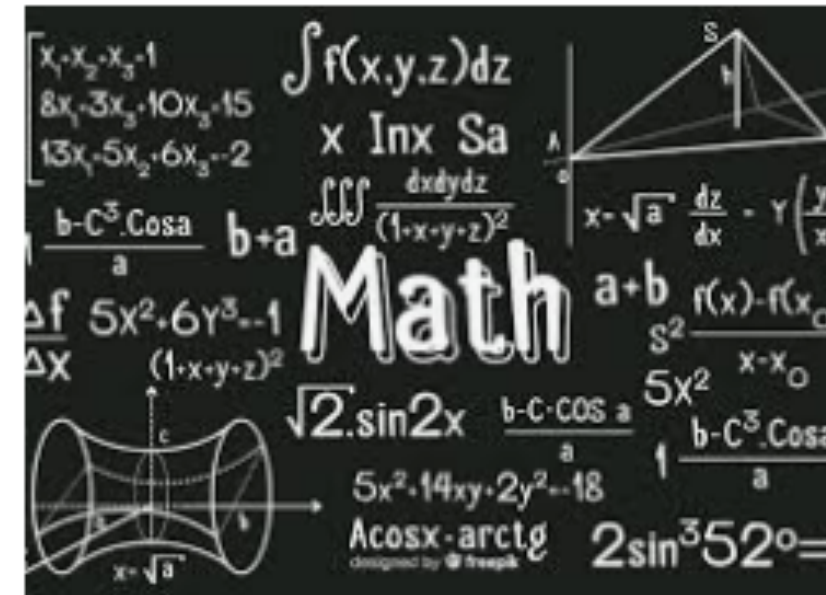
How to overcome a fear of maths
phys.org



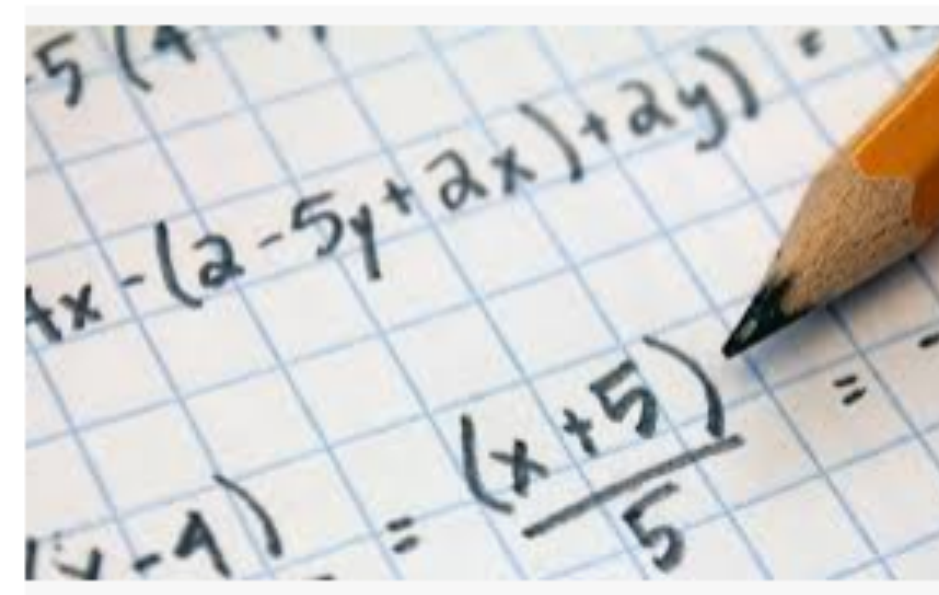
Forest City Regional School District
fcrsd.org



Why don't we spend more time t...
districtadministration.com



Calculus — The Mathematics of 'Change ...
towardsdatascience.com



This Basic Math Problem Is Breaking the ...
inc.com



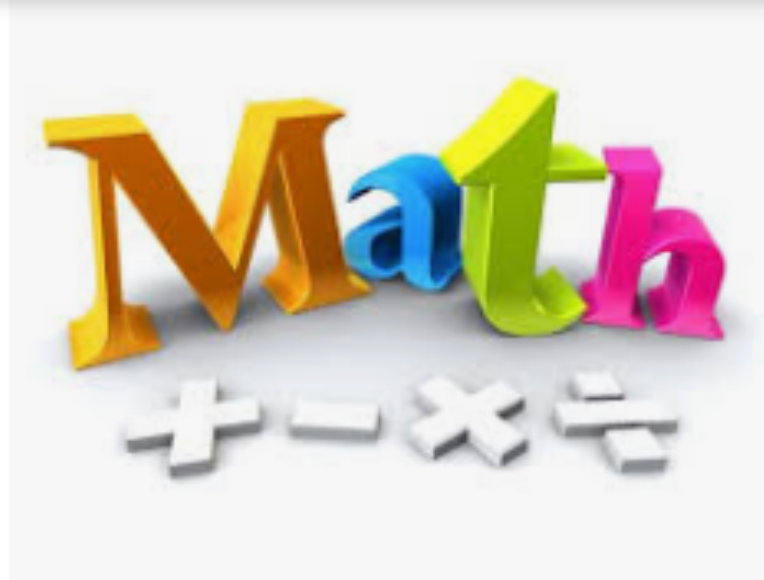
The Math Behind COVID-19 Modeling
scitechdaily.com



@BuildMathMinds

Google

elementary math



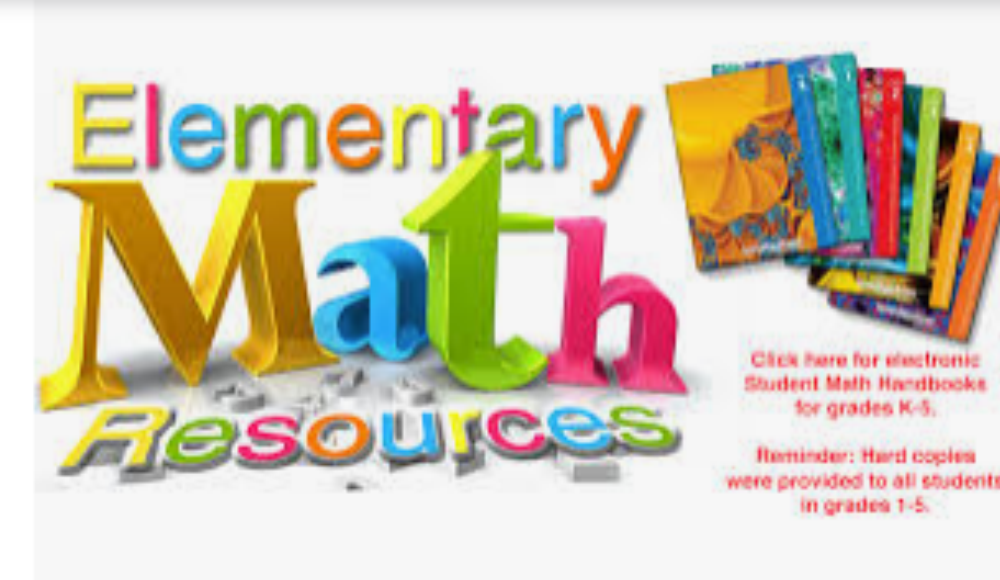
Curriculum & Instruction / Elementary ...
onslow.k12.nc.us



Elementary Math: A Digital Deep ...
home.edweb.net



Elementary Grades K-5 - Debbie Waggoner
debbiewaggoner.com



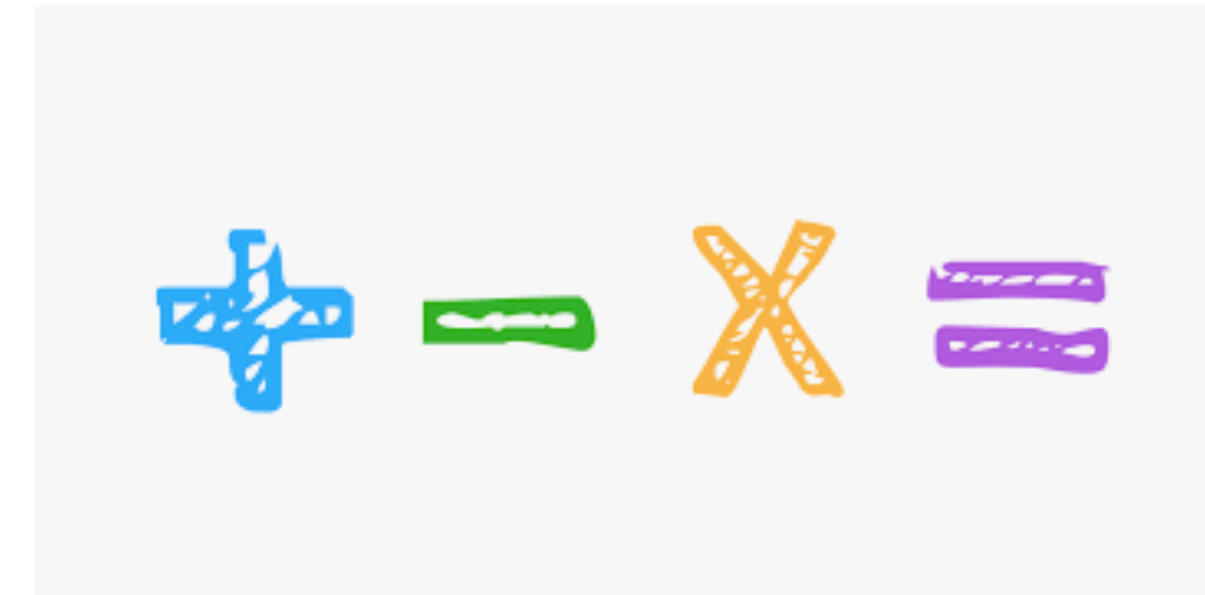
CCPS Elementary Math / Homepage
collierschools.com



elementary math | Math Solutions
mathsolutions.com



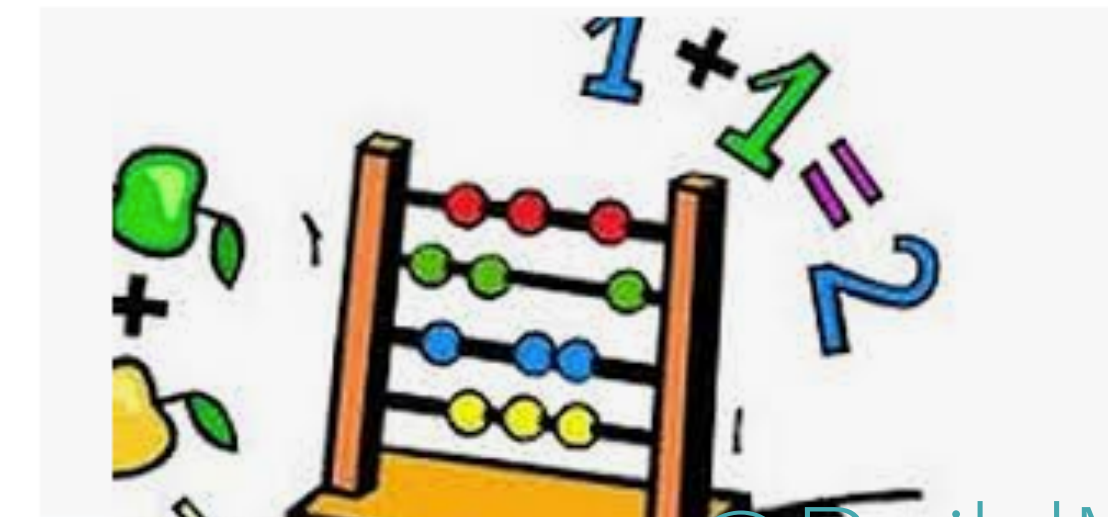
On My Soapbox About Elementary Math ...
k6instructionalcoach.com



Math in Elementary School ...
bu.edu



<https://www.google.com/?&bih=694&biw=1099&hl=en>

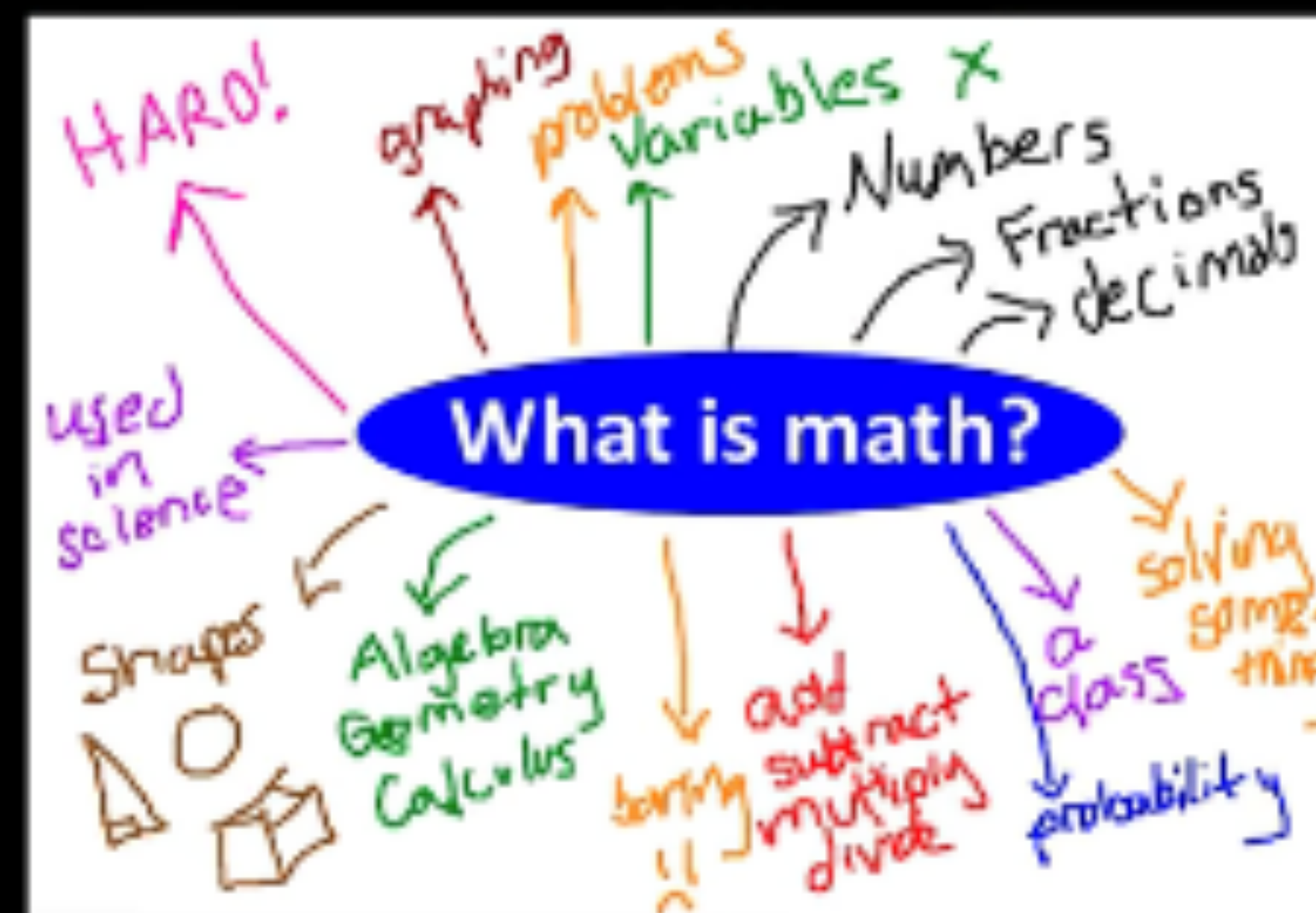


@BuildMathMinds



How do you
define math?

Students say...



VW

@BuildMathMinds



**What do
mathematicians do?**

Mathematics is
the study of
PATTERNS.

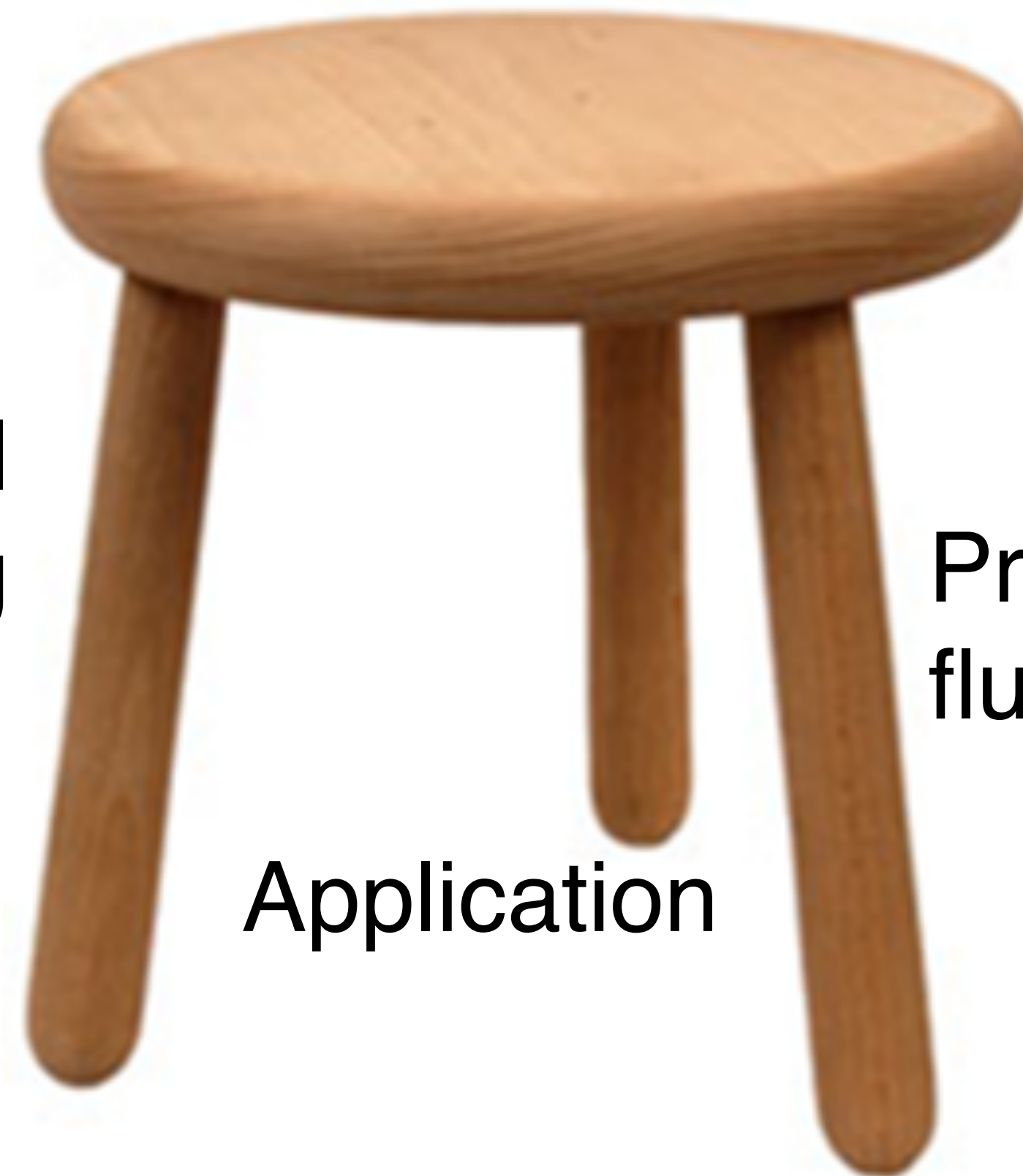
mathematicians **NOTICE** patterns
describe patterns
GENERALIZE patterns

VW

@BuildMathMinds

3 Aspects of Rigor

Conceptual
understanding



Procedural skill and
fluency

Application

Conceptual Understanding

K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality.

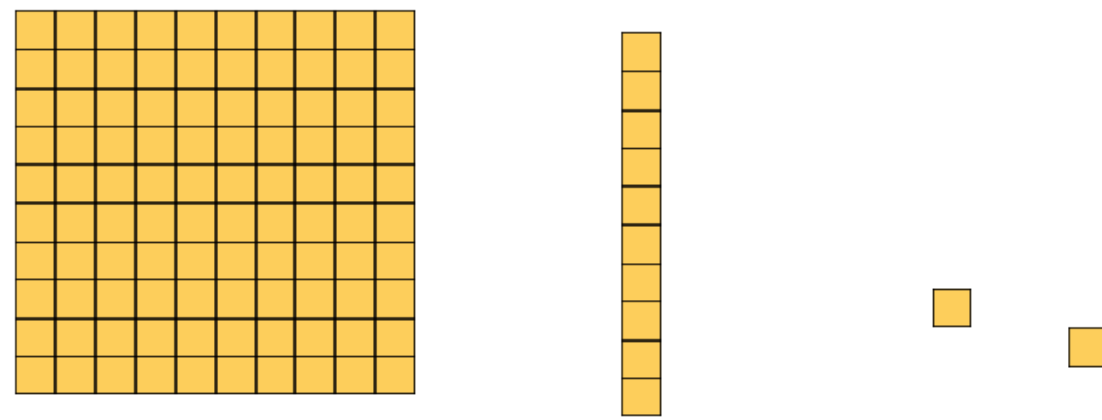
Procedural Skill and Fluency

2.OA.2 Fluently add and subtract within 20 using mental strategies.

Application

1.OA.1 Use addition and subtraction within 20 to solve **word problems** involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions..

Kyndall and Pam were looking at their base 10 blocks for the number 112. Pam says 112 has 11 tens. Kendall says 112 has 1 ten. Who do you think is correct and why?



Conceptual Understanding

On Monday, Joe walked 3 miles. On Tuesday, Joe walked 3 miles again. On Wednesday, Joe walked some more. Altogether Joe walked 10 miles. How far did Joe walk on Wednesday?

Application

Mark each as True or False:

Procedural Fluency

$$4 + 3 = 3 + 4 \quad \underline{\hspace{2cm}}$$

$$12 - 5 = 6 \quad \underline{\hspace{2cm}}$$

$$13 = 10 + 3 \quad \underline{\hspace{2cm}}$$

$$6 + 11 = 5 + 10 \quad \underline{\hspace{2cm}}$$

CCSS – Mathematical Practices

(pp. 6-8)

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.