YPS Parent Academy

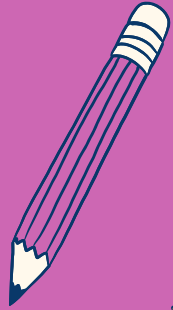## Are you G.A.M.E. in Math?
Session 3: 3/4/23
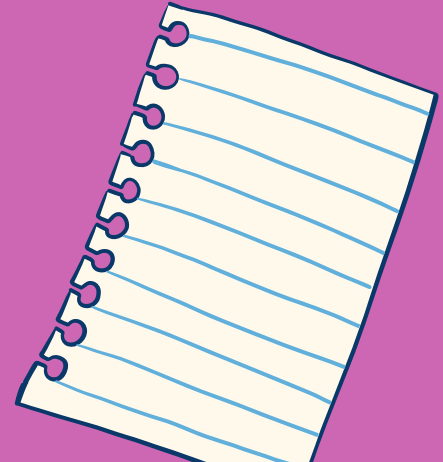### Middle Grades

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$a^2 + b^2 = c^2$$

GROWTH MINDSET

ACCESS

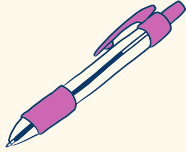ARE YOU G.A.M.E.?

EXPERIENTIAL

MATH TALK

Introductions!
Who am I?

Please share:

- Name
- Child's School
- Child's Grade Level
- A number that is significant and represents something that is important to you.

Our Parent Workshops!

Come join us for a series of workshops for parents of students in **grades K-8**, designed to teach you:

- math concepts that your child is learning in school
- math tools you can use to assist your child in better understanding the math concepts
- games and activities you can use with your child to reinforce what they are learning in school

When

- 9:30-11:30AM on select Saturdays
  - ~~1/28/23~~
  - ~~2/11/23~~
  - 3/4/23
  - 3/18/23
  - 4/15/23
  - 4/29/23
 - 5/6/23

Growth Mindset in Math!

Growth Mindset

I can learn anything I want to.
When I'm frustrated, I persevere.
I want to challenge myself.
When I fail, I learn.
Tell me I try hard.
If you succeed, I'm inspired.
My effort and attitude determine everything.

Fixed Mindset

I'm either good at it, or I'm not.
When I'm frustrated, I give up.
I don't like to be challenged.
When I fail, I'm no good.
Tell me I'm smart.
If you succeed, I feel threatened.
My abilities determine everything.

Which mindset do you have for math? Your child?

How do we praise our children?

PRAISE
VS
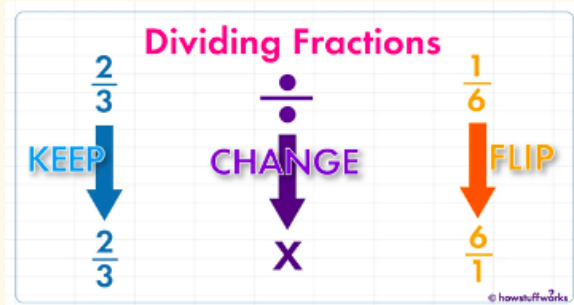
A STUDY BY CAROL DWECK
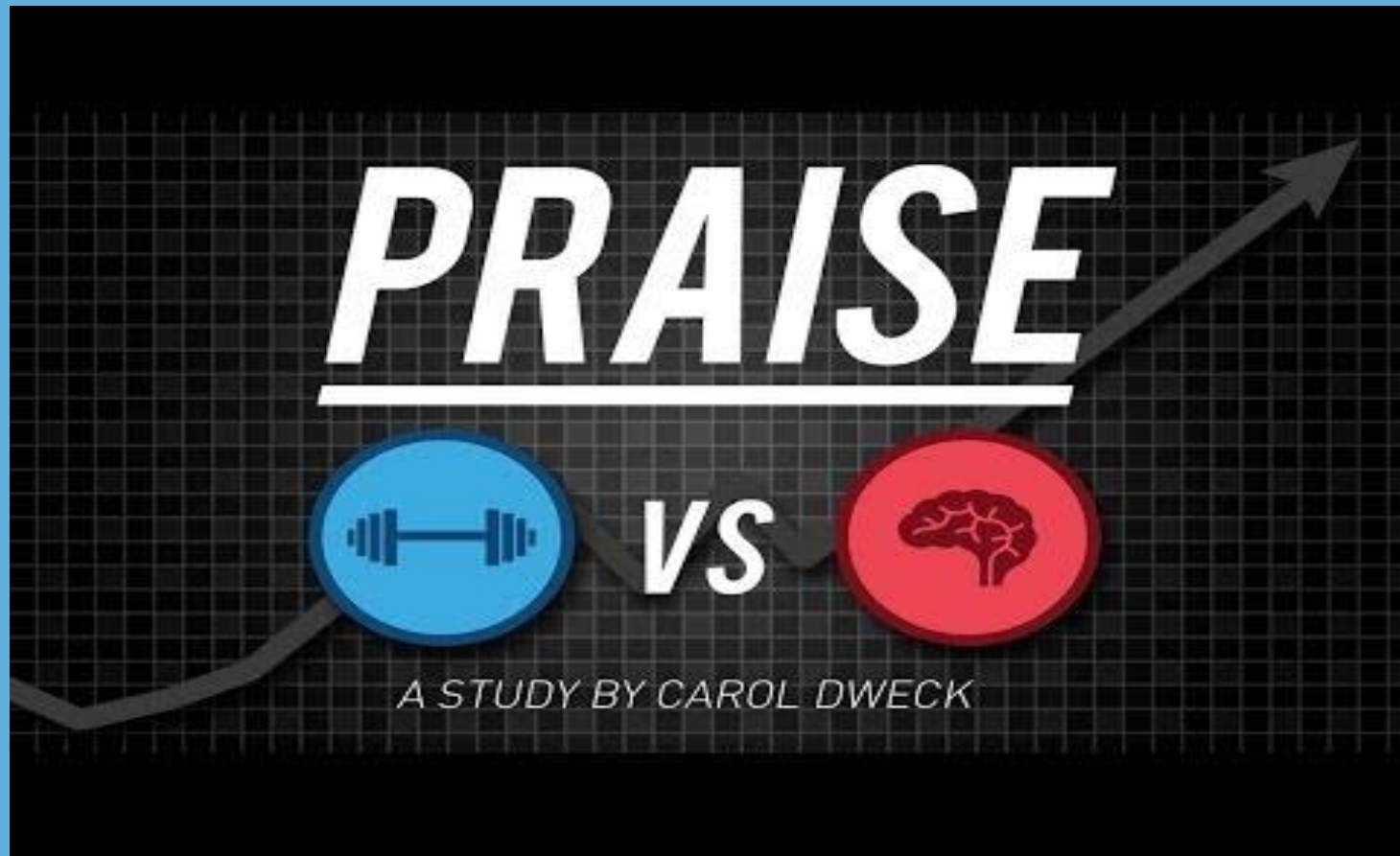
PRAISE: Intelligence vs. Effort

Time to Reflect

- What words do you usually use when you praise your children for their math work?
- After watching the video, what might you do the same or different, moving forward?
- What role do you think "mindset" has played in your child's progress with math?
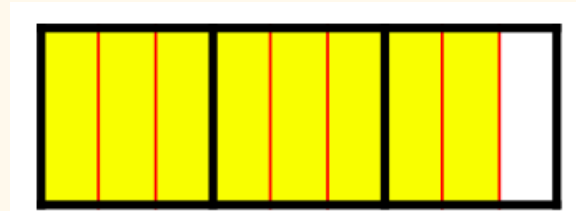
Dividing Fractions

Keep Change Flip

Cross Multiplication

$$\frac{2}{7} \div \frac{3}{5} = \frac{2 \cdot 5}{3 \cdot 7}$$
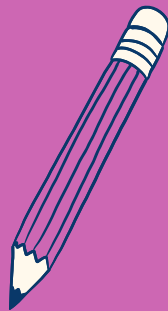
Model

Divide

$$2\frac{2}{3} \div \frac{1}{3} = 8$$
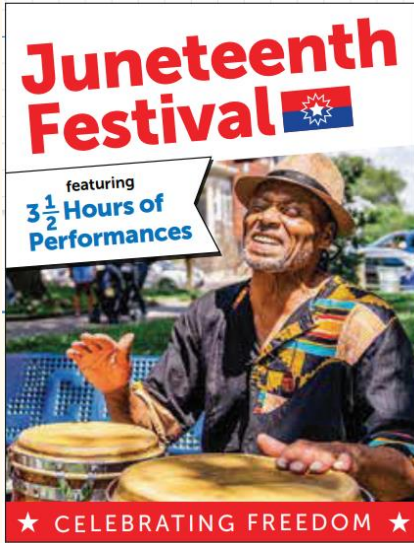
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$a^2 + b^2 = c^2$$

Dividing Fractions

Imani is planning her city's Juneteenth festival. There will be $3\frac{1}{2}$ hours of performances on the main stage. Each performer's time slot lasts $\frac{3}{4}$ hour. How many time slots can Imani plan to have?
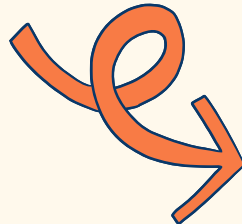
1. What would you do to solve this problem?
2. What might your child struggle with?

$$3\frac{1}{2} \div \frac{3}{4}$$

$$\frac{7}{2} \div \frac{3}{4}$$

(keep, change, flip)

$$\frac{7}{2} \cdot \frac{4}{3} = \frac{28}{6}$$

$$6\overline{)28.00} \quad 4.\overline{66}$$
$$-24$$
$$40$$
$$-36$$
$$40$$

$4.\overline{66}$ or $4\frac{2}{3}$

$$3\frac{1}{2} \div \frac{3}{4}$$

$$3.5 \div 0.75$$

$$0.75\overline{)3.50.00} \quad 4.\overline{66}$$
$$-300$$
$$500$$
$$-450$$
$$500$$

$4.\overline{66}$ or $4\frac{2}{3}$

The FEAR of Fractions!!!

Students often struggle with problems like this because they are "afraid" of fractions and have not mastered the different operations with fractions. We need to focus less on the STEPS and more on what the problem is actually asking and WHY we follow the steps we do.

Imani is planning her city's Juneteenth festival. There will be $3\frac{1}{2}$ hours of performances on the main stage. Each performer's time slot lasts $\frac{3}{4}$ hour. How many time slots can Imani plan to have?

How do we help students better understand a problem like this when they are "afraid" of fractions?

5 Out Of 4 People Have A Problem Understanding Jokes About Fractions.

Let's explore some TOOLS!

Strategy #1: Fraction Circles

Imani is planning her city's Juneteenth festival. There will be $3\frac{1}{2}$ hours of performances on the main stage. Each performer's time slot lasts $\frac{3}{4}$ hour. How many time slots can Imani plan to have?
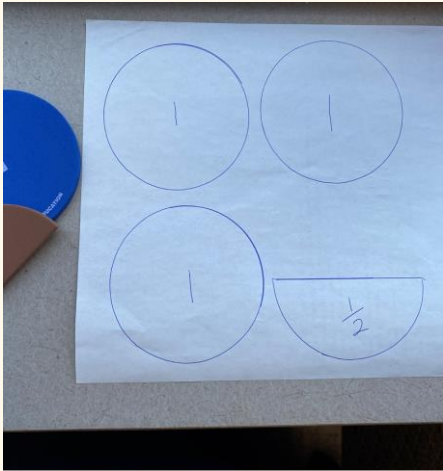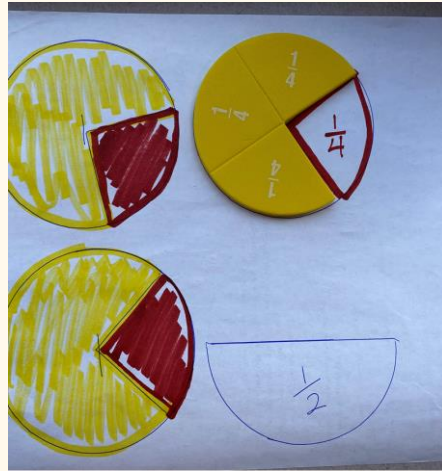

Use the 1 and ½ circles to show 3 ½.

Take out ¾. How many times can it fit inside the 3 ½?

Since ¾ fits inside the 3 wholes evenly (4 times), we need to know how many times it can fit inside ½. Only 2 of the 3 pieces will fit, so it is 2/3.

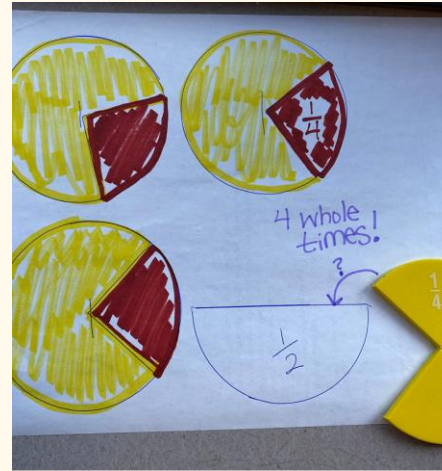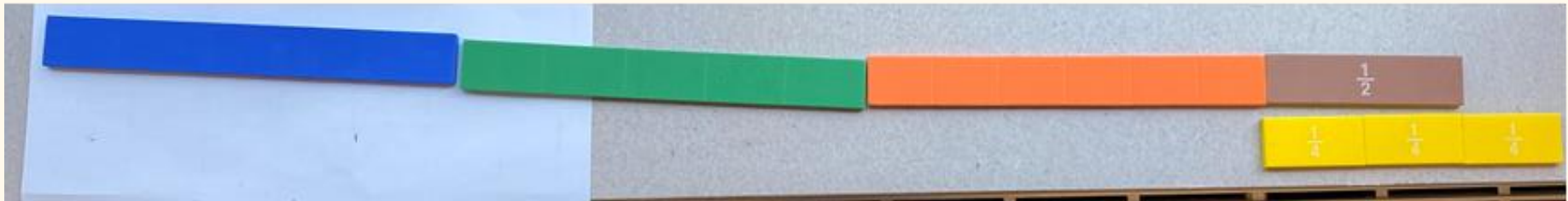# Strategy #2: Fraction Tiles

Imani is planning her city's Juneteenth festival. There will be $3\frac{1}{2}$ hours of performances on the main stage. Each performer's time slot lasts $\frac{3}{4}$ hour. How many time slots can Imani plan to have?

Line up 3 wholes and 1 half. How many times can you fit ¾ if you line them up?

Notice that you can keep lining up the ¾ along the 3 ½ until you get to the end. It fits 4 whole times but on the 5th time, only 2 of the 3 pieces fit.

Strategy #3: Number Lines

Imani is planning her city's Juneteenth festival. There will be $3\frac{1}{2}$ hours of performances on the main stage. Each performer's time slot lasts $\frac{3}{4}$ hour. How many time slots can Imani plan to have?

Using a ruler, you can set up an open number line with any numbers and fractions you want. This models the same concept without the use of manipulative tools.

Number Lines

$\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ 1   2   3   4

3.5 or $3\frac{1}{2}$
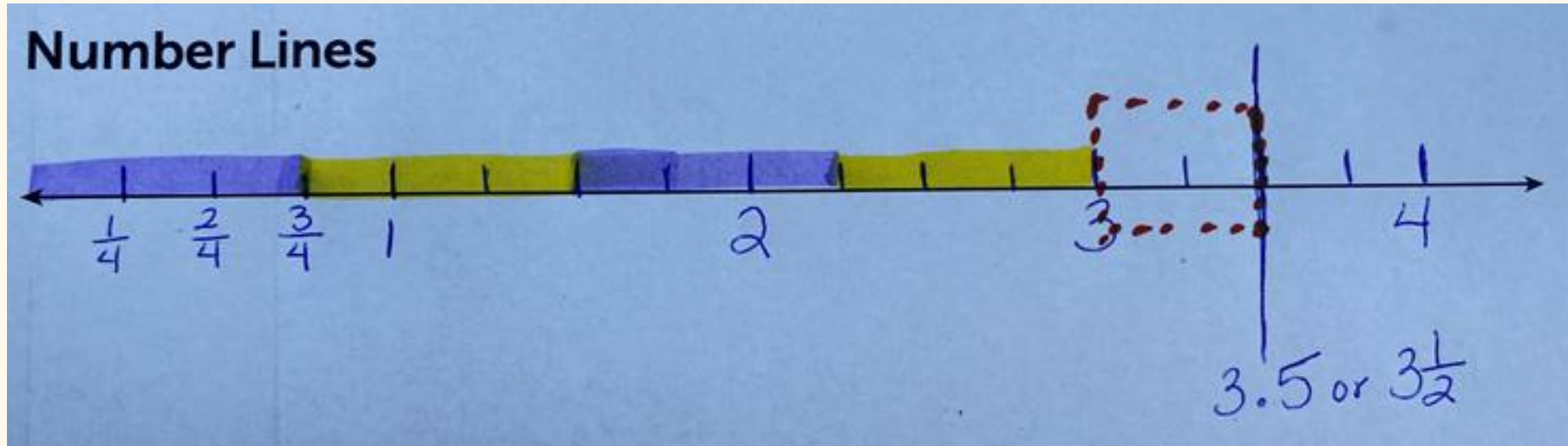
Apply different strategies!

Mr. Lincoln is making slime for his kindergarten class. He has 3 cups of glue. Each batch of slime uses $\frac{2}{3}$ cup of glue. How many batches of slime can Mr. Lincoln make? Show your work.

Use the tools in your kit to solve this problem in as many different ways as possible.

1. Which strategy is your child more likely to use?
2. What connections did you notice among the different strategies?
3. Why is it important for students to learn multiple strategies?

Race to 10!!!
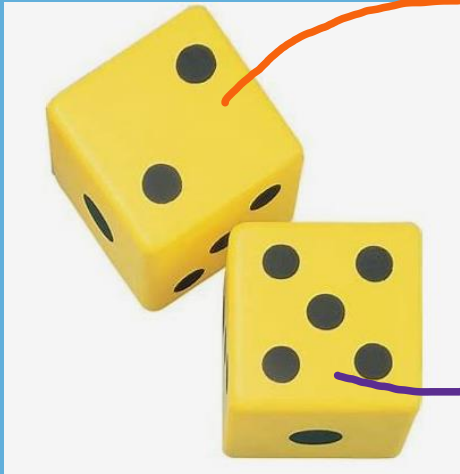
$$1 \div \frac{2}{5}$$

1. **Play in pairs.**
2. **Roll your 2 yellow dice.**
   - The lower number is your numerator.
   - The greater number is your denominator.
3. Divide 1 by your fraction.
4. Once you have your answer, roll again to form another fraction.
5. Divide again and repeat!

GOAL: Be the first one to get to 10 or more!

Let's Play!

Manipulative Kits!!!

You are welcome to take your kits home to use with your kids! At the end of the Parent Academy, they are yours to keep!

If you bring it home, please bring it back with you next session.

We cannot give you another one the next time you come.

Please give us feedback!