DIG INTO INTERVENTION: FRACTION ADDITION

Presented by MathLinks Author
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For more information about our core programs for middle school and intervention programs for grades 6-9, please visit:

www.mathandteaching.org

In this session, you will learn:

- Some models for illustrating fraction addition
- Some strategies for adding fractions

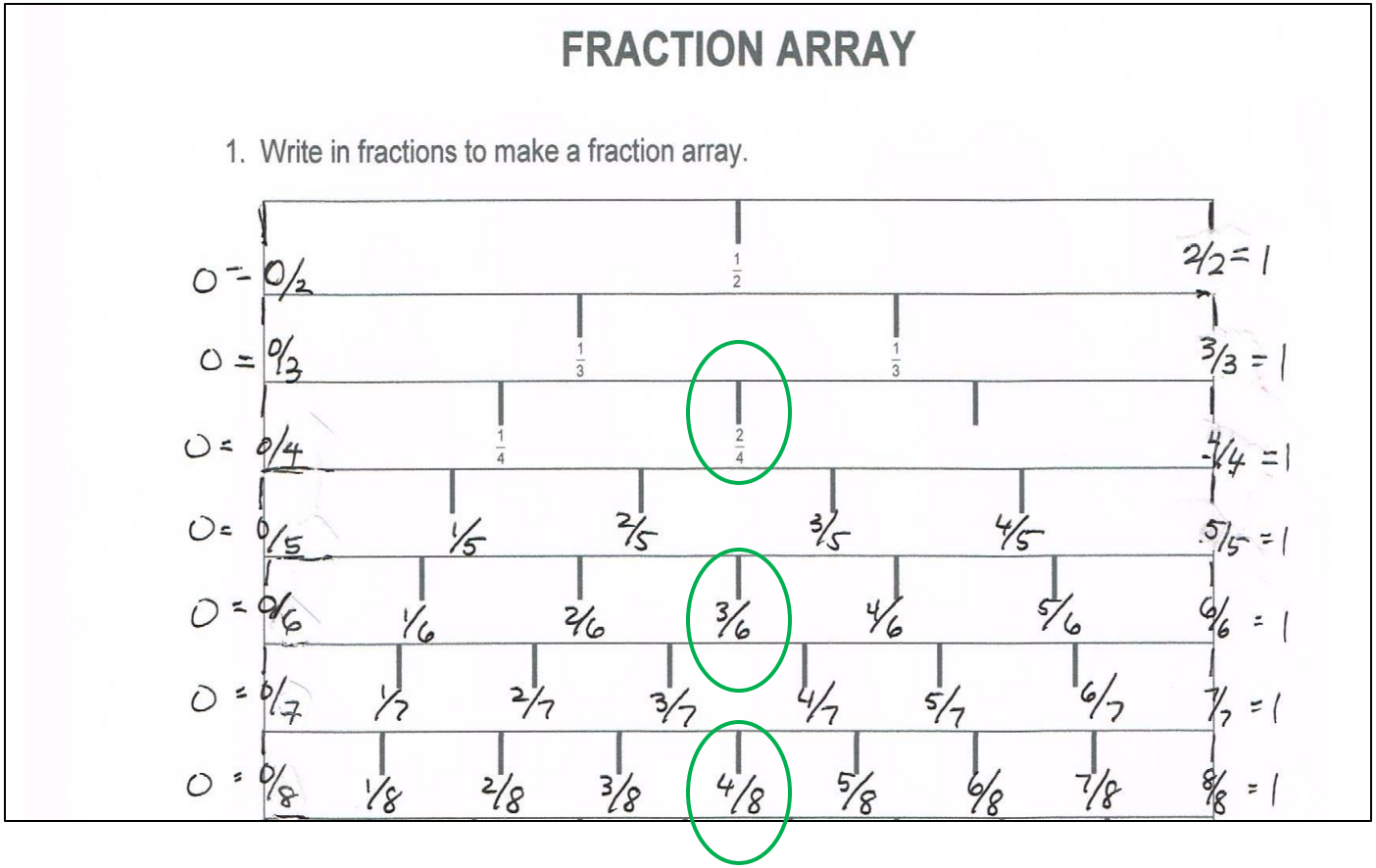
Philosophy

Many learners struggle with fractions in middle school and beyond. Our intervention work:

- Reviews elementary topics from a more mature perspective
- Develops concepts using sense making strategies
- Uses horizontal recording techniques that help prepare students for algebra

Assumptions

Students understand fraction meaning and equivalence.



Assumptions

Students can rename fractions using "the big 1."

Diagram 1

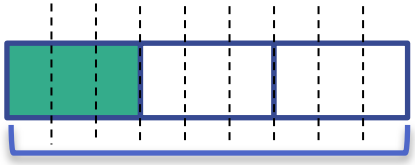
$\frac{1}{3}$

1 whole

$$\frac{1}{3} \cdot \frac{3}{3} = \frac{3}{9}$$

Diagram 2

$\frac{3}{9}$

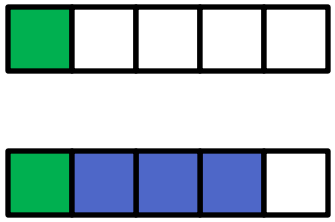


1 whole

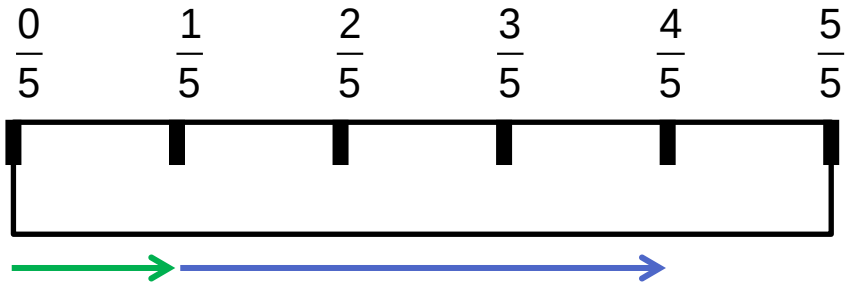
Strategies/Approaches

- Use a diagram
- Use mental math
- Use paper and pencil calculations

Add: $\frac{1}{5}+\frac{3}{5}$

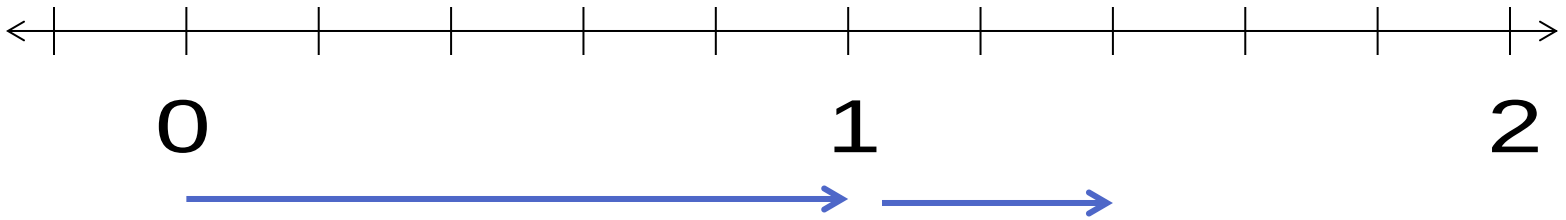


$$\frac{1}{5}+\frac{3}{5}=\frac{4}{5}$$



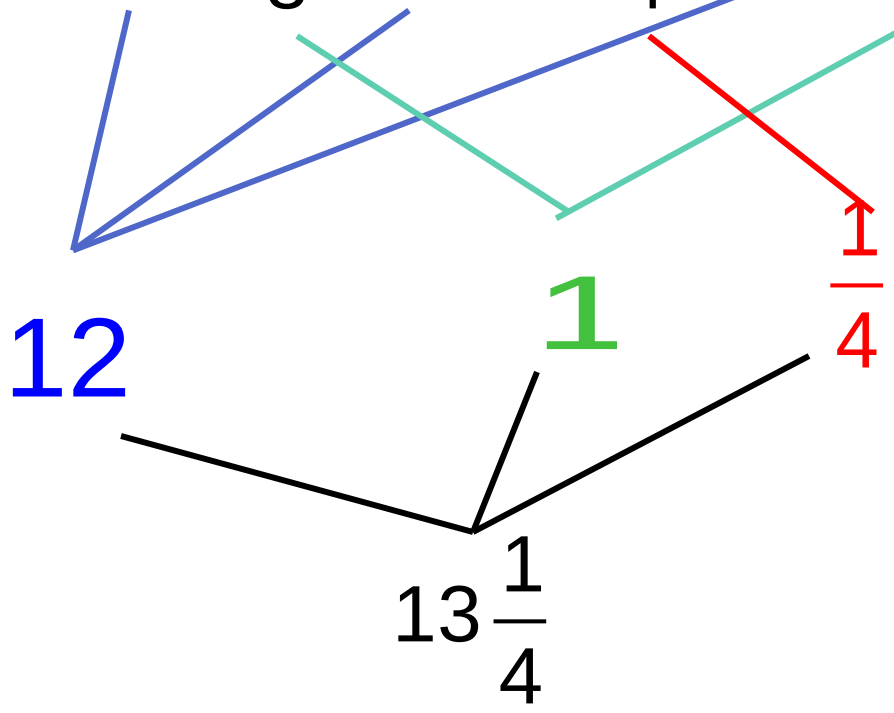
Interpreting "mixed" numbers

$$1\frac{2}{5} = 1 + \frac{2}{5}$$

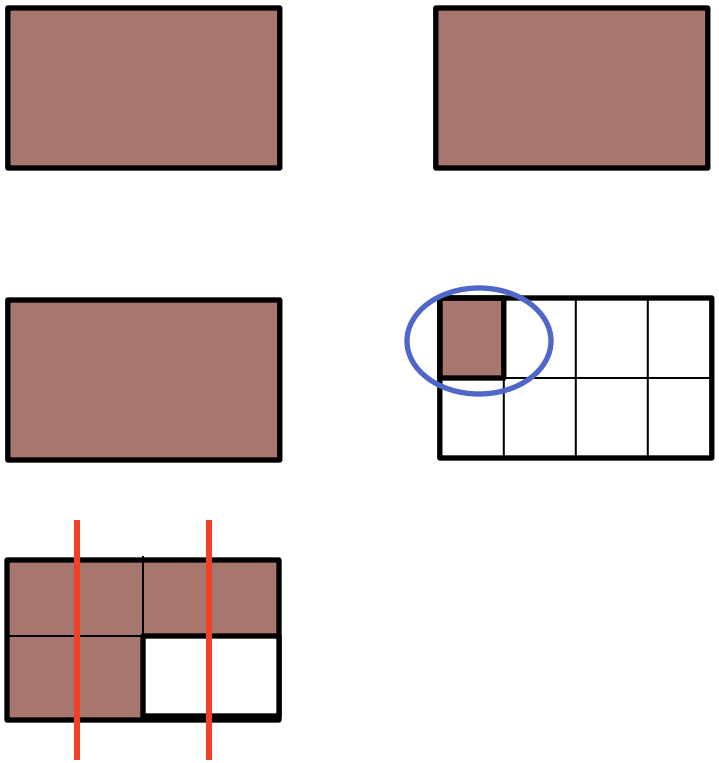


Add: $6\frac{1}{3}+2\frac{1}{4}+4\frac{2}{3}$

$$= 6 + \frac{1}{3} + 2 + \frac{1}{4} + 4 + \frac{2}{3}$$



You have two and three-fourths waffles. Your friend has one and one-eighth waffles. How many waffles do you have together?



$$2\frac{3}{4}+1\frac{1}{8}$$

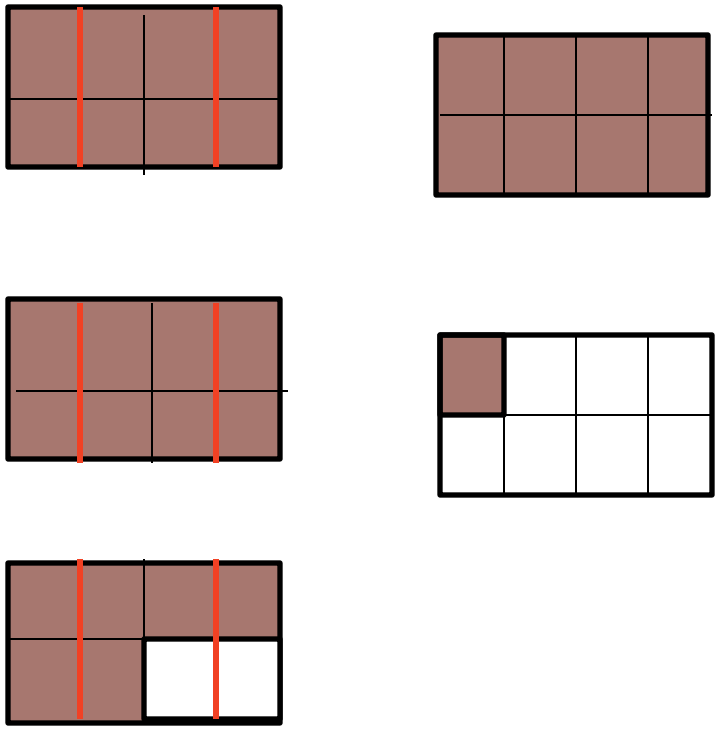
$$=2+\frac{3}{4}+1+\frac{1}{8}$$

$$=3+\frac{3}{4}\left(\frac{2}{2}\right)+\frac{1}{8}$$

$$=3+\frac{6}{8}+\frac{1}{8}$$

$$=3+\frac{7}{8}=3\frac{7}{8}$$

You have two and three-fourths waffles. Your friend has one and one-eighth waffles. How many waffles do you have together?



$$2\frac{3}{4}+1\frac{1}{8} = \frac{11}{4} + \frac{9}{8}$$

$$= \frac{11}{4}\left(\frac{2}{2}\right) + \frac{9}{8}$$

$$= \frac{22}{8} + \frac{9}{8}$$

$$= \frac{31}{8} = 3\frac{7}{8}$$

Sequence summary - adding only

1. $\frac{1}{5}+\frac{3}{5}$

2. $\frac{2}{3}-\frac{1}{2}$

3. $1\frac{2}{5}=1+\frac{2}{5}$

4. $6\frac{1}{3}+2\frac{1}{4}+4\frac{2}{3}$

5. $1-\frac{3}{8}$

6. $3-\frac{3}{8}$

7. $2\frac{3}{4}+1\frac{1}{8}$

8. $3\frac{1}{3}-2\frac{1}{2}$

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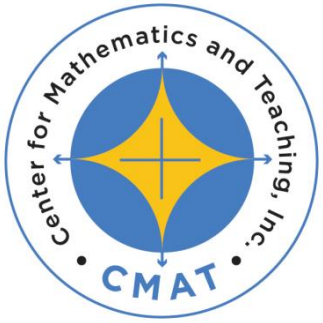

OUR PROGRAMS:

- Comprehensive 6-8 curriculum
- Customized intervention grades 6-9
- Special Education programs
- Supplemental programs

For more information, please visit our website at www.mathandteaching.org

THANK YOU!

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