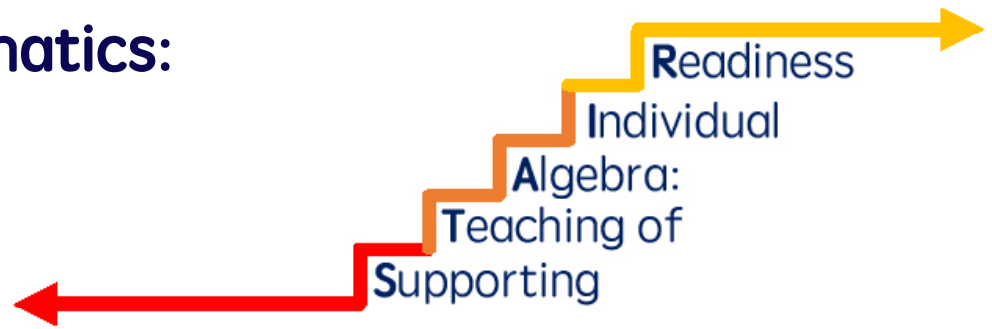



Ideas in Mathematics: Fractions




Strategies to Practice Fractions:


Equivalent Fraction Activities

Interactive Notebook with Models


$\frac{1}{2}$

 1 out of 2 parts
 When divided up into equal parts, what does this model equal now?
 $\frac{1}{2}$
 There are 2 equal parts and 1 parts are shaded.

$\frac{2}{4}$

 2 out of 4 parts
 When divided up into equal parts, what does this model equal now?

 There are _____ equal parts and _____ parts are shaded.


$\frac{3}{6}$

 3 out of 6 parts
 When divided up into equal parts, what does this model equal now?




 There are _____ equal parts and _____ parts are shaded.




$\frac{4}{8}$

 4 out of 8 parts
 When divided up into equal parts, what does this model equal now?

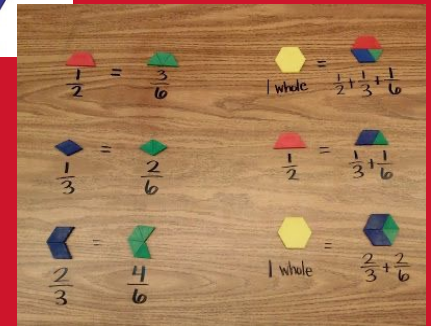
 There are _____ equal parts and _____ parts are shaded.

Pattern Blocks

If the value of  is one whole, what fraction is each of the following?

- Build one whole using 
- Build one whole using 
- Build one whole using 



Number Lines

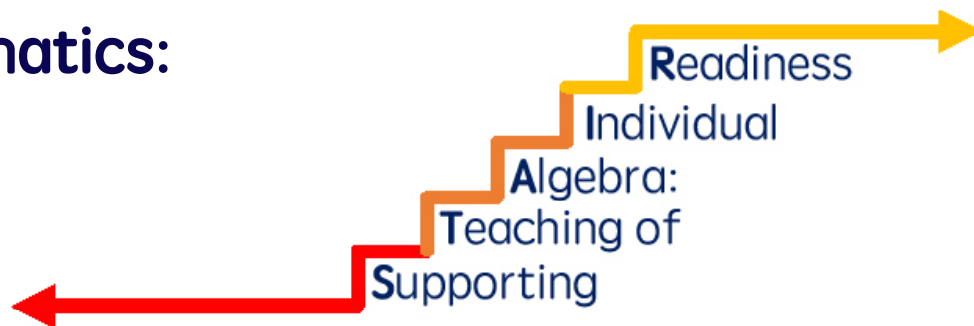
Find an equivalent fraction of $\frac{1}{4}$ by drawing two number lines.

Fractoin Tiles

Use fraction tiles for fraction with different denominators to make 1 whole and find many different representations of fractions!

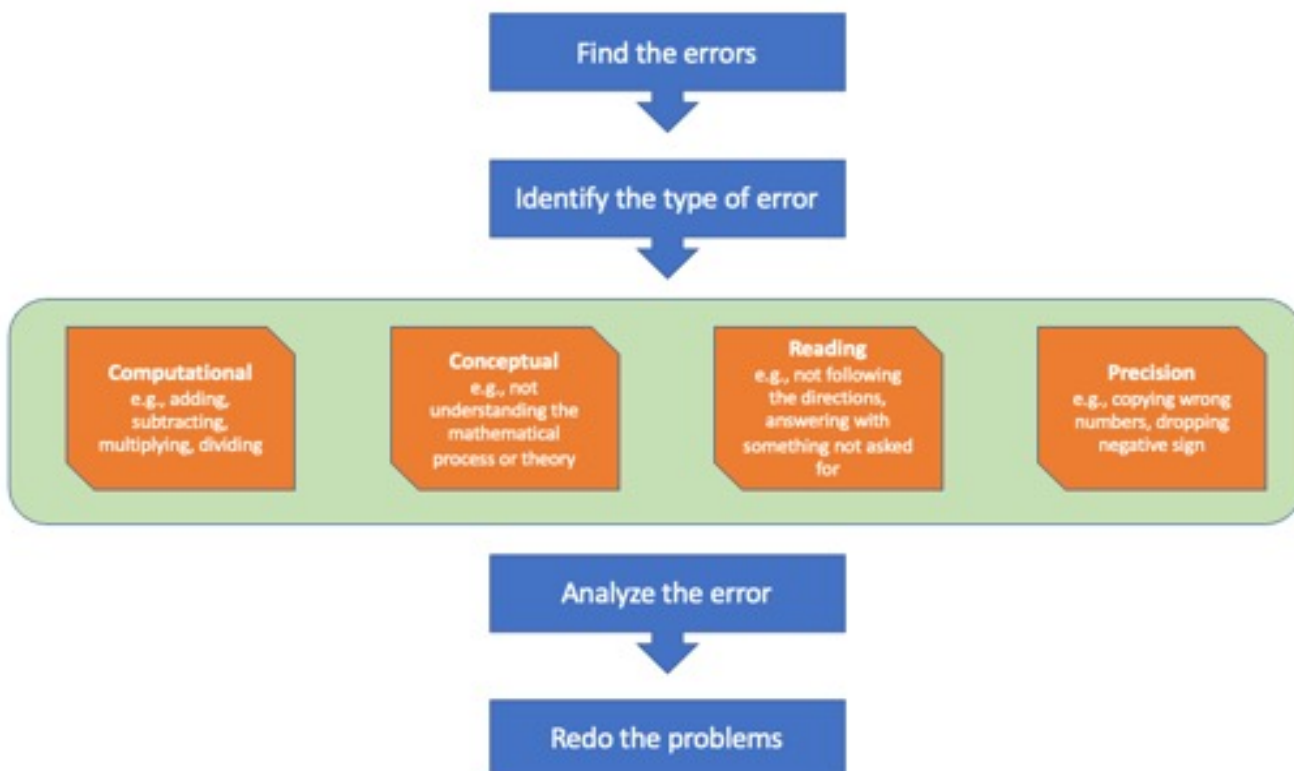
Ideas in Mathematics:

Fractions



Addition/ Subtraction of Fractions

Error Analysis



Schumacher & Malone (2017)

Subtraction Fractions Error Analysis

Answer Key

$$\frac{7}{15} - \frac{3}{10} = \frac{4}{5}$$

Rework the problem

$$\frac{7}{15} - \frac{3}{10} = \frac{25}{150} - \frac{45}{150} = \frac{1}{6}$$

Identify and Explain the Error

The student performed operations across numerators and denominators separately.

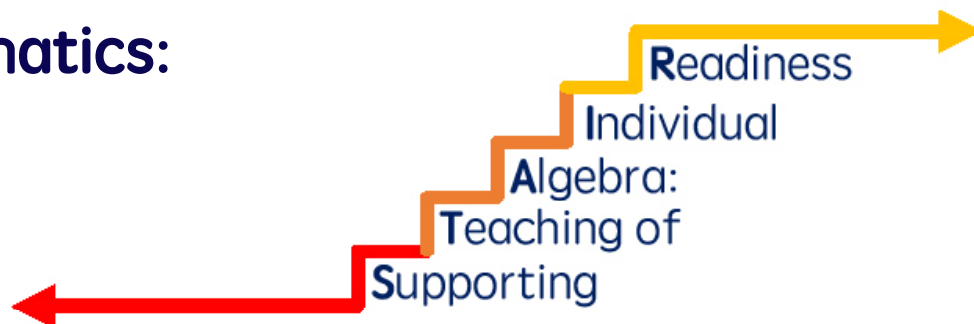
Share a strategy...

Make sure the denominators are the same!

1. Identify and Explain the Error.
2. Share a strategy with students.
3. Let student rework the problem.

Ideas in Mathematics:

Fractions



Description of Error Analysis

Category	Descriptions	Example
Independent Whole Number		
Example 1	Treats the numerators and denominators as independent whole numbers	$2/10 + 1/2 = 3/12$
Example 2	Treats the numerators as independent whole numbers	$2/10 + 1/2 = 3/10$
Combination		
Example 1	Combines denominators and numerators into a whole number; adds all (4) numbers together or observes no distinct between numerators and denominators	$2/10 + 1/2 = 312$
Example 2	Combines denominators and numerators into a new fraction; makes top fraction the numerator and bottom fraction the denominator when set up vertically.	$2/10 + 1/2 = 12/3$

Multiplication/ Division of Fractions

'I Do, We Do, You Do' using fraction strips

$\frac{1}{2} \div \frac{1}{6} = 3$

$\frac{1}{2}$

$\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$

$\frac{1}{6}$ fits into $\frac{1}{2}$ three times

I Do – Explain and model using the strips.

- “I will place $\frac{1}{2}$ at the top”
- “Next, underneath it, I’ll put as many $\frac{1}{6}$ strip as I can to match the $\frac{1}{2}$ strip.”
- “We can see that it takes one, two, three $\frac{1}{6}$ strips to match the $\frac{1}{2}$ strip”

We Do – Guide students through trying it with you.

- “Now let’s try this together. I will place $\frac{1}{2}$ at the top. You do the same...”
- Model it and then walk around to help students who may need support.

You Do – Tell students they’ll be doing them on their own.

- “Try the next several problems by yourself or with your partner.
- Provide guidance as needed.

