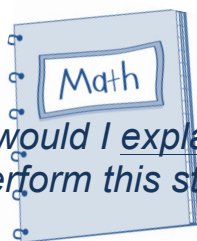


### Step 3: Working Through a Tutorial



*“Hmmm? How would I explain this step?”  
“I’ll demonstrate how I perform this step in my solution path”*

*Get It Guide Math Tutorials* will guide your child through a solution path step-by-step using effective questions similar to what their classroom teacher could ask.

Teachers use effective questions to encourage student discourse... *talking and communicating about math.*



The National Council of Teachers of Mathematics (NCTM) identifies asking good questions and promoting student discourse as an integral part of teaching and learning in the classroom.

*Get It Guide Tutorials* will assist your child in using this same learning strategy for math study while at home.

When we ask a question we are also eliciting a response. Your child’s response provides them with important information regarding the learning process.

When it comes to solving a particular type of math problem, what steps of the solution path does your child understand?

More importantly, what are the steps that require more review and practice?

Being able to self-assess their understanding at various steps in a solution path is a key part of engaging in the learning process.

**How do I write a mixed number as an improper fraction?**

*Could I use a number line to help solve?*

**What’s an equivalent fraction?**

*Can I show how two fractions are equivalent?*

**What does simplest form look like?**

*Do I multiply or divide to find the GCF?*

**How would I subtract two integers?**

$$-8 \frac{3}{4} \quad \left( \begin{array}{l} \text{Why do I just subtract my numerators?} \\ \text{Why do I need common denominators?} \\ \text{How do I choose my LCD?} \end{array} \right) \quad -2 \frac{1}{2}$$

**What are multiples of a number?**

*What does it mean... whatever I do to the bottom I also do to the top?*

**What does add the opposite look like?**

*How do I determine the sum of two integers?*

*What am I doing when I simplify?*

*Hmmm... factors of a number?*

**Discuss** with your child how they can work through a tutorial by **emphasizing** the following learning strategies...

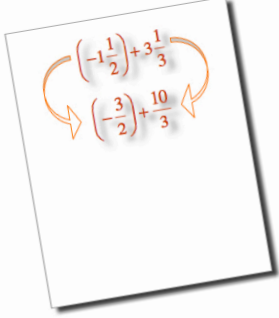
Rational Numbers - Add Rational Numbers 3

SELECT YOUR TOPIC

Can you describe how this student begins their solution path?

How would **you** begin your solution path when solving this type of problem?

What previous math skills do **you** think you'll use?



**Suggest** they read each question aloud.

**Establish the expectation** that they not automatically respond to a question by saying... *I don't get it!*

**Encourage** them to wait three or more seconds to think about and respond to the question they've just read. **Remind** them that they might know more than they think they do!

**Reassure** them not to be afraid of making an error... we learn from errors. Discovering an error in their solution path provides students with the opportunity to make adjustments in how they solve and keeps learning moving forward.

**Have** them keep some scrap paper handy to write and record their thinking on a particular step within the solution path. They can also print the tutorial questions as a worksheet activity. Writing will help your child document, reflect on and share their thinking with you and their classroom teacher.

**Emphasize** and **encourage** your child to see each step in solving their problem as a **learning-oriented goal** that will require effort, practice and persistence. For each step of their solution path they want to strive to...

**Demonstrate how they solve**       **Explain how they solve**

**Help** your child establish parameters for staying on task such as setting a time frame (15 – 20 minute segments of focused uninterrupted work) or working until they reach a step in their solution path they do not understand.

**Praise** their effort and persistence as they work toward their learning-oriented goals, not just when they achieve them.

SELECT YOUR TOPIC

Rational Numbers - Add Rational Numbers 3

This student is re-writing each mixed number as an improper fraction

$$\left(-1\frac{1}{2}\right) + 3\frac{1}{3} = \left(-\frac{3}{2}\right) + \frac{10}{3}$$

How do I re-write a mixed number as an improper fraction? Does a negative sign effect how I do this?

When I look at an improper fraction, the numerator will be larger than the denominator!

An improper fraction represents more than 1 whole!

When they are ready they can advance the tutorial and compare their response. **Remind** your child there's more than one-way to explain and perform a step within a given solution path.

When your child is reading through the tutorial response to a question, **suggest** that they reflect on how they responded and performed a particular step by asking themselves the following...

- How did I explain/perform this step within the solution path?
- Is my explanation/demonstration the same as the tutorial?
- How is my explanation/demonstration different to the tutorial?
- Can I think of other approaches for explaining/performing this step within the solution path?
- Which approach for explaining/performing this step do I prefer? Why?

