

What is found in an Engaging Mathematics TEKS-based activity?

TEKS have been phrased in student-friendly language so that students may gauge their learning.

Common classroom materials are used for ease of preparation. Materials are listed 1-per-student unless otherwise noted. Page titles for student handouts are bolded.

ELPS have been included in the form of a student-friendly language objective.

Rational Number Operations, Activity 7
7(3)(A)

Activity Objective

I can add, subtract, multiply, and divide rational numbers fluently.

I can explain how to use estimation to determine if a solution is reasonable.

Materials

- **Fraction Operations Loop**
- **Fraction Operations Loop Cards**
- Scissors
- Tape or glue

Answer Key

Expression	Solution
$-2\frac{3}{4} + 8\frac{3}{8}$	$5\frac{5}{8}$
$(-2\frac{2}{3})(-1\frac{2}{5})$	$3\frac{11}{15}$
$3\frac{1}{3} \div (1\frac{1}{2} \div \frac{7}{12})$	$1\frac{1}{4}$
$\frac{-3\frac{1}{4}}{1\frac{1}{2}}$	$-2\frac{1}{6}$
$3\frac{1}{2} - 7\frac{5}{12}$	$-3\frac{11}{12}$
$\frac{4}{5} \div \frac{3}{8}$	$-2\frac{2}{15}$

Debriefing Questions

- What steps did you take to simplify $3\frac{1}{3} \div (1\frac{1}{2} \div \frac{7}{12})$? Why?
- How are the two division problems similar? How are they different?

Listen For . . .

- Use of the standard algorithms for fraction operations.
- Use of vocabulary such as denominator, improper, mixed number, numerator, reciprocal, and simplify.
- Understanding of the order of operations.

Communicating about Mathematics

Students may respond by talking to a partner and recording a written response in the space provided.

Possible sentence frame:
I could use estimation _____.

Listen/Look For . . .

Understanding of the effects of rounding up or rounding down when estimating an answer.
Use of benchmarking fractions.

Answer key is included for each activity.

Debriefing questions are included to assist the teacher with facilitating a post-activity student discussion.

Each activity includes an opportunity for students to articulate and summarize their own learning. A sentence frame is provided for students who may need language support.

Key learning outcomes from the debriefing discussion are summarized here.

Key learning outcomes from the Communicating about Mathematics section are included here.