

College Preparatory Mathematics Chapter 5 Sample Argumentation Task

5-32. Jessica was still searching for an easier way to multiply $3\frac{1}{3} \cdot 2\frac{3}{4}$ (from Anita's recipe in problem 5-31), when she thought of a shortcut. "*I know!*" she said, "*Can't we just multiply $3 \cdot 2$ and then multiply $\frac{1}{3} \cdot \frac{3}{4}$ and then add the results?*" Consider Jessica's idea with your team as you answer the questions below.



- a. What result would you get using Jessica's method? Is this result correct?

This sample could be a HIGH QUALITY argument task as long as some adjustments are made. It addresses a **mathematical misconception** many students face. Personally, I would even get rid of the directions to consider Jessica's idea with your team and part a of the problem and simply pose the question to my students about whether or not they agree with Jessica's idea and why or why not.

"Jessica believes she has a shortcut method to multiply $3\frac{1}{3}$ times $2\frac{3}{4}$, "*Multiply 3 times 2 and then multiply $\frac{1}{3}$ times $\frac{3}{4}$ and then add the results.*" Does Jessica's method work for this example? Does it work for any multiplication of mixed numbers? Be sure to provide evidence and explain your reasoning."