



Unit 3 Open Response Assessment

Comparing Shares of Paper

Ten members of the Student Council are each making a poster for the school picnic. Each student is going to cut out shapes from pink or yellow paper to paste on poster board with the picnic information. The sheets of paper are the same size for both colors.

Ms. Fondy, the Student Council advisor, gave the group of students 2 sheets of pink paper and 3 sheets of yellow paper. Six students chose pink and 4 chose yellow.

Libby and Marcus complained that the students getting the pink sheets and the ones getting the yellow sheets were not getting equal shares. Ms. Fondy asked Libby and Marcus to explain why they thought that everyone was not getting the same amount of paper. Libby and Marcus began by agreeing about the following:

- Each of the 6 students who want pink will get $\frac{2}{6}$ of a sheet.
- Each of the 4 students who want yellow will get $\frac{3}{4}$ of a sheet.

① Marcus said, “I think that people who chose yellow will get more paper. $\frac{2}{6}$ is less than $\frac{1}{2}$, and $\frac{3}{4}$ is greater than $\frac{1}{2}$. That means that $\frac{3}{4}$ is greater than $\frac{2}{6}$.”

Use drawings of fraction strips, fraction circles, or a number line to show how Marcus used a benchmark fraction in his thinking. Explain how the drawing shows his thinking.



Unit 3 Open Response Assessment (continued)

- ② Libby said, “I know that twelfths can be used to make equivalent fractions for sixths and fourths.”

“I know that $\frac{1}{6} = \frac{2}{12}$. So $\frac{2}{6}$ will be two times as many twelfths, or $\frac{4}{12}$.”	“I know that $\frac{1}{4} = \frac{3}{12}$. So $\frac{3}{4}$ will be three times as many twelfths, or $\frac{9}{12}$.”
Libby wrote on the board: $\frac{2}{6} = \frac{2 * 2}{6 * 2} = \frac{4}{12}$	Libby wrote on the board: $\frac{3}{4} = \frac{3 * 3}{4 * 3} = \frac{9}{12}$

Libby concluded by saying, “Since $\frac{4}{12}$ is less than $\frac{9}{12}$, the students getting $\frac{2}{6}$ of a piece of the pink paper are getting less than those getting $\frac{3}{4}$ of a piece of the yellow paper.”

Use drawings of fraction strips, fraction circles, or a number line to show how Libby used equivalent fractions in her thinking. Explain how the drawing shows her thinking.