Just In Time Quick Check Standard of Learning (SOL) 1.4a

Strand: Number and Number Sense

Standard of Learning (SOL) 1.4a

The student will represent and solve practical problems involving equal sharing with two or four sharers.

Grade Level Skills:

- Share a whole equally with two or four sharers, when given a practical situation.
- Represent fair shares pictorially, when given a practical situation.
- Describe shares as equal pieces or parts of the whole (e.g., halves, fourths), when given a practical situation.

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - <u>1.4ab Sharing Brownies</u> (Word) / <u>PDF Version</u>
 - VDOE Word Wall Cards: Grade 1 (Word) | (PDF)
 - Fair Share
 - Fraction: Half and Fourth

Supporting and Prerequisite SOL: <u>1.4b</u>, <u>K.5</u>

Virginia Department of Education

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1) Two friends share 1 cookie. Draw on the cookie below to show how they share equally.



2) Four friends share this pizza. Draw on the pizza to show much of the pizza each friend gets.



3) Two friends share 8 pieces of candy. Draw a picture to show fair shares.

4) Four friends share 2 brownies. Draw a picture to show how much each friend gets.

SOL 1.4a - Just in Time Quick Check Teacher Notes

Common Errors/Misconceptions and their Possible Indications

1) Two friends share 1 cookie. Draw on the cookie below to show how they share equally.



I cut the cookie into ______.

A common student error is to create parts that are not equivalent. Students who lack understanding of fair shares may not divide the cookie equally into two (or possibly more) equal parts so that it can be shared fairly between two. They may hold the misunderstanding that any line that separates the cookie into two sections creates two halves while not paying any attention to whether the parts are equal. Students who struggle creating equal parts need additional opportunities to use concrete models, including paper cookies (of different sizes and shapes) that can be cut and tested to be sure they are equal.

A common misconception exhibited by some students is to say that each person gets one piece. Emphasize that the question asks how much <u>of the cookie</u> each friend gets. Students who are unable to use the vocabulary for halves to describe the parts will need additional opportunities to describe the parts in this way.

2) Four friends share a pizza. How much of a pizza does each friend get? Show your answer on the pizza below and label the pieces.



I cut the pizza into _____.

In addition to the misconceptions stated in Task 1, students may have difficulty representing equal shares for more than two sharers. A common misconception is for students to draw only horizontal or only vertical lines to divide the circle. The concept of "fair shares" is not present in their understanding. Students who are not yet able to think about or represent equal shares will benefit from opportunities to divide area models (both circle and rectangle models) representing a pan of brownies, and length models (such as a length of paper or string) for four sharers. They will benefit from reinforcing the idea of fair shares (equal shares) ensuring that each sharer is getting the same amount. Opportunities to describe the fair share parts as fourths should be included in ongoing lessons addressing this content.

3) Two friends share 8 cookies. Draw a picture to show fair shares.

Some students may only divide up the cookies with each friend receiving one or two or three cookies but not utilizing all of the cookies. Students may have any number of ways that they divide a set to share. Observe

students as they share the cookies. Some students may use their knowledge of doubles and will solve the task easily, while others may share the cookies one by one until all are shared. It is important to focus on the idea of equality and to ask the student how they know that the cookies have been shared fairly.

4) Four friends share 2 brownies. Draw a picture to show how much each friend gets.

As with task 3, students may have different ways to attempt to share the brownies fairly. A common misconception is that since there are only two brownies, there is not enough to share with four friends. Students who answer in this way have not yet developed an understanding of parts and wholes and may lack experiences in decomposing shapes. Another student may cut one brownie into fourths and give one piece to each friend, but say that there is one brownie left over. Emphasize the practical situation of sharing the brownies. "If you and your friends have these two brownies, how could you share them fairly so that there is no brownie leftover?" This problem presents the ideas of both splitting a whole into equal parts and distributing the resulting pieces fairly.