

OPEN AND PARALLEL TASKS FOR GRADE 2

In *Great Questions: Great Ways to Differentiate Mathematics Instruction*, (2009) NCTM, Marion Small proposes big ideas for each strand of mathematics and then presents the strategy of using Open and Parallel tasks related to the same big mathematical ideas as a way to better meet the needs of all students in a classroom.

Level C/Grade 2

These differentiated tasks are based on the “How Many Eggs” task on page 21 of *Making Sense of Problem Solving: Targeting NCTM Curriculum Focal Points, Level C/Grade 2*, (2008) Teacher to Teacher Publications, Inc.

Open Task:

There were 4 trees. Two bird nests were in each tree. There were 24 eggs all together. How many eggs were there in each nest?

Parallel Tasks:

Option 1:

There were 2 trees. Two bird nests were in each tree. Two eggs were in each nest. How many eggs were there in all?

Option 2:

There were 4 trees. Two bird nests were in each tree. Seven eggs were in each nest. How many eggs were there in all?

Note:

A teacher can create an open question by starting with a question that has only one possible solution and then change the question so that multiple answers are possible. Directing students to think about how they can tell if they've found all possible solutions adds another level of differentiation. The Open Task above invites a variety of possible combinations of eggs that could be found in each of the eight nests and still total 24 eggs in all. An organized list starting with one egg in each of the first seven nests with the leftover 17 eggs in the final nest would be one possible way students might think to organize this task. The teacher could introduce the possibility of such a list in follow-up discussions if none of the students come up with it.

In the Parallel Tasks, Option 1 is a simplification of the numbers in the original task appropriate for struggling students. Counting by twos is an easier pattern with which students of this age are usually proficient. The groups of seven eggs in each nest are more complex to add in the Option 2 task, so they present more of a challenge for proficient students.