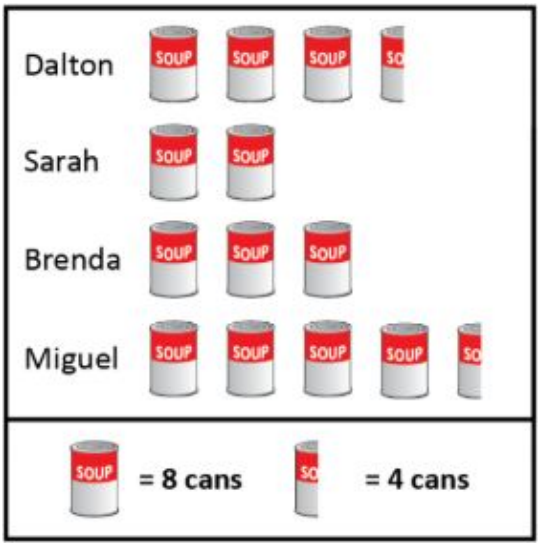
Grade 3 - Math Sample Items

Grade Level: Grade 3
Common Core Standard: 3.MD.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
DOK Level: 2

Students are gathering cans for a food drive. The picture graph shows the total cans gathered by four students. Sarah wants to gather as many cans as Miguel.

Number of Cans Gathered



How many more cans does she need to gather?
A. $2\frac{1}{2}$
B. $16\frac{1}{2}$
C. 20
D. 36

A. Miguel does have $2\frac{1}{2}$ more cans in the graph, but the legend says that each whole can equals 8 cans and a half can equals 4 cans.
B. The scale shown in the legend was correctly applied to the whole cans, but not to the half can, which represents 4 cans.
C. Correct.
D. The cans Sarah has already gathered must be subtracted from, not added to, Miguel's total to determine how many more cans Sarah needs to gather.

Grade Level: Grade 3
Common Core Standard: 3.OA.2: Interpret whole-number quotients of whole numbers, e.g., interpret 56 / 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 / 8.
DOK Level: 3
Mark has 30 apple slices. He gives each of 5 friends an equal number of slices. How many apple slices does each friend get?
Shanna writes $30 \div 5$ to solve the problem. Is Shanna's work correct? Why or why not?

A. No, Shanna's work should show division, but it should read $5 \div 30$.
B. No, Shanna's work should show multiplication, so it should read 30 x 5.
C. Yes, Shanna's work shows dividing the number of apple slices by the number of friends.
D. Yes, Shanna's work shows reducing the number of apple slices by the number of friends.

A. The expression $5 \div 30$ means to divide the 5 into 30 equal groups, instead of the described situation of dividing the 30 into 5 equal groups.
B. The situation does not describe determining the total number of apple slices, but dividing the total number of apple slices into equal-sized groups.
C. Correct.
D. The explanation describes subtraction, 30-5, instead of dividing into equal-sized groups.

Grade Level: Grade 3
Common Core Standard: 3.NBT.1 CCSS.Math.Content.2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: CCSS.Math.Content.2.NBT.A.1a 100 can be thought of as a bundle of ten tens — called a “hundred.” CCSS.Math.Content.2.NBT.A.1b The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
DOK Level: 1
What is 357 rounded to the nearest ten?
A. 36
B. 60
C. 360
D. 400

A. The tens place rounds up, but it rounds up to 60, not to 6. The ones place cannot be dropped when rounding.
B. The tens place is closer to 60 than 50, but the hundreds place cannot be left out when rounding.
C. Correct.
D. The answer is rounded to the nearest hundred, not the nearest ten.