Standard Addressed by these Number Talks:

**4.NF.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.

Pose these number sentences to students and ask them to solve them mentally. The student’s role is to demonstrate fluent strategies for solving these problems. The teacher’s role is to pose the problem, give students a few minutes to solve the problems and then lead a discussion about how they solved the problems. Teachers will need to write down students’ thinking using number sentences that will show how students solved the problems. You need not pose all at once, but instead do a few each week during the unit (posing one problem in one setting, or a string of problems that build on each other in one setting or over the course of a week). Conversations may range from 10-20 minutes in length. See the article *Number Talks Build Numerical Reasoning (***October 2011 •** teaching children mathematics) for more information.

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| Standard | Number Talk Problem Sets | Rationale |
| **4.NF.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100. | 1/10 + 1/10  1/10 + 10/100  2/10 + 2/10  20/100 + 21/100  4/10 + 1/100  3/10 + 2/10  3/10 + 20/100  3/10 + 25/100  5/10 + 5/100  9/10 + 1/10  90/100 + 1/10  90/100 + 9/100  9/10 + 9/100 | These numbers talks are designed to support students as they start to think about combining tenths and hundredths. Students need to be able to see 2/10 as 20/100 and use that information to join tenths and hundredths. |