Number Talks

Number talks are designed by the teacher to focus students' thinking on specific mathematical ideas. Statements or problems should relate to mathematical ideas and concepts teachers want to develop. One goal of this activity is to generate strategies for mental arithmetic and relational thinking. True/False statements, number sentences and number related problems provide opportunities for students to develop understanding of number relationships, properties of mathematics and computational strategies.

Before the lesson the teacher plans a series of 4 to 8 number sentences (equations). Each number sentence is shown one at a time. The teacher or students may represent computational strategies with mathematical models to support student understanding. After each number sentence is shown ask students to share their thinking with partners, small groups and/or the whole class.

The next number sentence is shown and again students discuss how they solved the equation. Problems may be related so there may be a way to use the previous number sentence to solve the next one. Students' responses provide a window into their thinking and thus guide the next true/false statement or related problem. These problem types might be used to address ideas of equality, number facts, place value, relational thinking and properties of mathematics.

Teachers should structure true/false statements or related problems ahead of time. Statements or problems should relate to mathematical ideas and concepts teachers want to develop. Be flexible. Teachers may need to revise their list of problems based on students' responses. Often students need lots of similar problems to push their thinking.

Ask questions which focus students' thinking on the numbers in the problems not just on the answers. Value each student's strategies.

Examples of True or False Number Sentences
(Present to students one at a time.)

a). $9 + 5 = 5 + 9$

b) $14 = 5 + 9$

c) $4 + (1 + 9) = 2 \times 7$

e) $140 = 50 + 90$

d) $90 + 50 = (2 \times 70)$

Students have many misconceptions around ideas of equality. They may believe the answer can not come before the equal sign. They may think it is not correct to have different operation symbols in the same equation.