WHAT'S MISSING?

Performance Standard 8D.A

Solve a variety of simple number sentences and record answers on the recording sheet, using manipulatives:

- *Mathematical knowledge*: solve simple number sentences with variables.
- *Strategic knowledge*: use manipulatives to represent number sentence and find the correct solution.
- *Explanation*: explain what was done and why it was done.

Procedures

1. ***In order to use algebraic concepts and procedures to represent and solve problems (8D),*** students should experience sufficient learning opportunities to develop the following:
   - Solve simple number sentences with variables (e.g., missing addend problems).
2. This task may be given as a whole class assessment. Students work individually to solve and record answers. Students then explain, orally or in writing, how they used the manipulatives to solve the problem.
3. Evaluation: The students will be assessed using the mathematics rubric:
   - *Mathematical knowledge*: correct answers are obtained.
   - *Strategic knowledge*: manipulatives used appropriately.
   - *Explanation*: clearly describes what was done and why it was done.

Examples of Student Work follow

Time Requirements

- 15 - 18 minutes (Students who struggle longer than this may not be considered as meeting the standard.)

Resources

- Counters/manipulatives
- Copies of the "What's Missing" recording sheet
- Pencil
- Mathematics Rubric

NAME _____ **DATE** _____

What's Missing?

Student Recording Sheet

2 Points Each

Fill in the missing number.

1. $6 + 4 = x$
2. $8 - x = 4$
3. $x + 5 = 7$
4. $9 + x = 12$
5. $x - 2 = 8$
6. $14 - 7 = x$
7. $x + 2 + 2 = 5$
8. $0 + 5 + x = 8$
9. $3 + 4 + 2 = x$
10. $12 - 2 - 5 = x$

"Exceeds"

Name _____ Date 3-19-02

What's Missing?

Student Recording Sheet

Fill in the missing number.

1. 6 + 4 = 10
2. 8 - 4 = 4
3. 2 + 5 = 7
4. 9 + 3 = 12
5. 10 - 2 = 8
6. 14 - 7 = 7
7. 1 + 2 + 2 = 5
8. 0 + 5 + 3 = 8
9. 3 + 4 + 2 = 9
10. 12 - 2 - 5 = 5