EARLY ALGEBRAIC REASONING AND MISCONCEPTIONS OF THE EQUAL SIGN

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Relational Thinking

95 + 105 = _____ + 102

Solve this problem then explain in writing how you arrived at your solution.

Predict

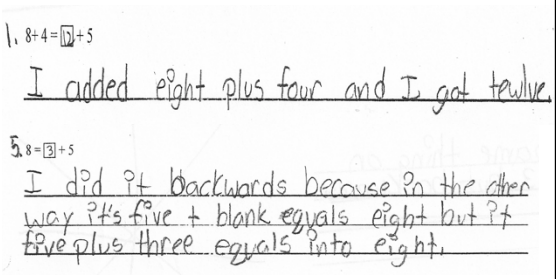
8 + 4 = ____ + 5

How might your students solve this equation?

Possible Responses	% of Class

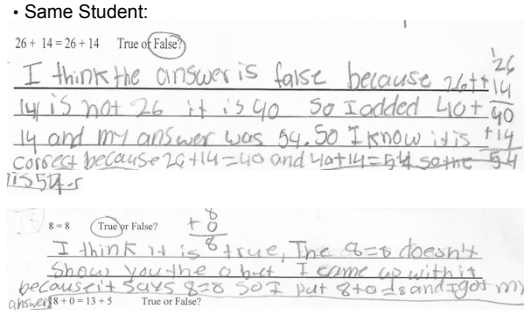
"Equal as Output" 6th Student Response

• Both responses from same student:

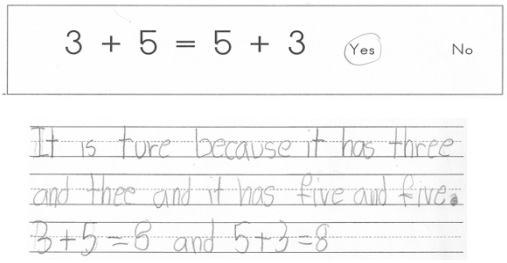


"Equal as Output" 6th Student Response

• Same Student:



Primary Grade Response



Concrete Representation

How would you model the solution to

8 + 4 = ___ + 5

using manipulatives?

Relational Thinking

Solve the following problem using the manipulatives to demonstrate your thinking:

2 X 6 = ☐ X 4

Write an explanation for your solution.

Relational Thinking

1/3 + 1/2 = ☐

Closure

- Do your students understand the meaning of the equal sign?
- What evidence will you use to find out what they think?
- How might you address their misconceptions?

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