

## RELATIONAL SUBTRACTION

Error Analysis • Find the Mistake

Objective: *Inspect the reasoning, find the mistake, and repair it.*

**DO THIS** Check each solution. Find the mistake. Repair the reasoning.

**WORKED ERROR** Find the wrong step, then correct it.

**EXAMPLE** A student wrote:

$$15 - 8 = 9 \quad \times$$

8 to 10 is 2, 10 to 15 is 5 → 7

$$15 - 8 = \underline{7}$$

**INSPECT EACH SOLUTION** Tick Correct or Incorrect. If incorrect, write the fix.

1

$$49 - 26 = 23$$

Correct     Incorrect

Fix:

2

$$93 - 85 = 8$$

Correct     Incorrect

Fix:

3

$$87 - 68 = 9$$

Correct     Incorrect

Fix:

4

$$79 - 31 = 48$$

Correct     Incorrect

Fix:

**REPAIR & PROVE** Rewrite each one correctly, then check it.

1

$$54 - 46 = \square$$

$$46 + \square = 54$$

2

$$48 - 37 = \square$$

$$37 + \square = 48$$

3

$$76 - 19 = \square$$

$$19 + \square = 76$$

Most mistakes came from:  miscount     wrong operation     place value

TEACHER EDITION

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1  
 $49 - 26 = 23$   
 Correct  Incorrect  
 Fix: already correct

2  
 $93 - 85 = 8$   
 Correct  Incorrect  
 Fix: already correct

3  
 $87 - 68 = 9$   
 Correct  Incorrect  
 Fix: 19

4  
 $79 - 31 = 48$   
 Correct  Incorrect  
 Fix: already correct

**REPAIR & PROVE** Rewrite each one correctly, then check it.

1  
 $54 - 46 = \underline{8}$   
 $46 + \underline{8} = 54$

2  
 $48 - 37 = \underline{11}$   
 $37 + \underline{11} = 48$

3  
 $76 - 19 = \underline{57}$   
 $19 + \underline{57} = 76$

**TEACHER NOTES** Answer key & guidance

Answers: #1 correct; #2 correct; #3 incorrect → 19; #4 correct  
 Common error: Off-by-one when counting up across ten

Strategy: Recompute independently, compare  
 Prompt: "Where exactly did the reasoning change?"

Most mistakes came from:  miscount  wrong operation  place value