

## 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

$$97 - 79 = 19$$

Correct  Incorrect

Fix:

2

$$63 - 40 = 24$$

Correct  Incorrect

Fix:

3

$$88 - 71 = 17$$

Correct  Incorrect

Fix:

4

$$78 - 28 = 49$$

Correct  Incorrect

Fix:

5

$$67 - 9 = 2$$

Correct  Incorrect

Fix:

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

1

$$87 - 42 = \square$$

$$42 + \square = 87$$

2

$$76 - 57 = \square$$

$$57 + \square = 76$$

3

$$71 - 13 = \square$$

$$13 + \square = 71$$

Most mistakes came from:  miscount  wrong operation  place value

TEACHER EDITION

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**EXAMPLE** A student wrote:

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

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

1  
 $97 - 79 = 19$   
 Correct  Incorrect  
 Fix: 18

2  
 $63 - 40 = 24$   
 Correct  Incorrect  
 Fix: 23

3  
 $88 - 71 = 17$   
 Correct  Incorrect  
 Fix: already correct

4  
 $78 - 28 = 49$   
 Correct  Incorrect  
 Fix: 50

5  
 $67 - 9 = 2$   
 Correct  Incorrect  
 Fix: 58

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

1  
 $87 - 42 = \underline{45}$   
 $42 + \underline{45} = 87$

2  
 $76 - 57 = \underline{19}$   
 $57 + \underline{19} = 76$

3  
 $71 - 13 = \underline{58}$   
 $13 + \underline{58} = 71$

**TEACHER NOTES** Answer key & guidance

Answers: #1 incorrect → 18; #2 incorrect → 23; #3 correct; #4 incorrect → 50; #5 incorrect → 58  
 Strategy: Recompute independently, compare  
 Common error: Off-by-one when counting up across ten  
 Prompt: "Where exactly did the reasoning change?"

Most mistakes came from:  miscount  wrong operation  place value