

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

$$19 - 16 = 3$$

Correct Incorrect

Fix:

2

$$11 - 5 = 6$$

Correct Incorrect

Fix:

3

$$14 - 3 = 11$$

Correct Incorrect

Fix:

4

$$15 - 5 = 10$$

Correct Incorrect

Fix:

5

$$8 - 1 = 7$$

Correct Incorrect

Fix:

6

$$15 - 8 = 3$$

Correct Incorrect

Fix:

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

1

$$18 - 8 = \square$$

$$8 + \square = 18$$

2

$$11 - 8 = \square$$

$$8 + \square = 11$$

3

$$11 - 7 = \square$$

$$7 + \square = 11$$

Most mistakes came from: miscount wrong operation place value



TEACHER EDITION

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Fix: already correct

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$$15 - 8 = 3$$

Correct Incorrect

Fix: 7

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

1

$$18 - 8 = \underline{10}$$

$$8 + \underline{10} = 18$$

2

$$11 - 8 = \underline{3}$$

$$8 + \underline{3} = 11$$

3

$$11 - 7 = \underline{4}$$

$$7 + \underline{4} = 11$$

TEACHER NOTES Answer key & guidance

Answers: #1 correct; #2 correct; #3 correct; #4 correct; #5 correct; #6 incorrect \rightarrow 7

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

