



# The Great Schoolhouse Scramble

Grade 4 math · Rounding, Addition, Subtraction, Multiplication, Division · Reading level grades 3-4

Detective: \_\_\_\_\_ Date: \_\_\_\_\_

Someone scrambled the master schedule and locked Principal Rivera in the Teachers Lounge! Detective, help us crack the case.

1. Solve each math problem. The answer is a number, and the letter beside it is what that number stands for.
2. In the clue boxes, write that letter in every box showing the same number, then read the secret clue.
3. Use each clue to cross suspects off the list. The one suspect left at the end is the culprit!

**My answer: the Prankster is** \_\_\_\_\_

## Possible suspects

Cross off a row as each clue rules it out. The one left at the end is the culprit.

| NAME          | PRANK TOOL      | SECRET STASH  | HANDEDNESS   | HAIR COLOR  | DISTRACTION       |
|---------------|-----------------|---------------|--------------|-------------|-------------------|
| Charlie Chen  | Whoopee Cushion | Library Cards | Left Handed  | Sandy Blond | Gold Star Sticker |
| Uma Foster    | Fake Snake      | Hall Passes   | Left Handed  | Sandy Blond | Recess Bell       |
| Gabe Brooks   | Stink Bomb      | Hall Passes   | Right Handed | Sandy Blond | Juice Box         |
| Daisy Miller  | Whoopee Cushion | Lunch Tickets | Left Handed  | Sandy Blond | Gold Star Sticker |
| Hannah Kim    | Silly String    | Hall Passes   | Left Handed  | Sandy Blond | Gold Star Sticker |
| Fiona Patel   | Stink Bomb      | Library Cards | Right Handed | Sandy Blond | Gold Star Sticker |
| Quinn Hall    | Stink Bomb      | Box Tops      | Left Handed  | Sandy Blond | Recess Bell       |
| Paul Rivera   | Silly String    | Hall Passes   | Right Handed | Sandy Blond | Gold Star Sticker |
| Bella Cruz    | Fake Snake      | Library Cards | Right Handed | Sandy Blond | Gold Star Sticker |
| Sam Evans     | Fake Snake      | Lunch Tickets | Right Handed | Sandy Blond | Juice Box         |
| Victor Wright | Whoopee Cushion | Lunch Tickets | Right Handed | Sandy Blond | Recess Bell       |
| Wendy Diaz    | Stink Bomb      | Hall Passes   | Left Handed  | Bright Red  | Juice Box         |
| Mason Scott   | Whoopee Cushion | Box Tops      | Right Handed | Sandy Blond | Recess Bell       |
| Tina Lopez    | Itching Powder  | Hall Passes   | Left Handed  | Bright Red  | Gold Star Sticker |
| Ian Gomez     | Fake Snake      | Gold Stars    | Left Handed  | Sandy Blond | Gold Star Sticker |
| Lily Zhang    | Itching Powder  | Library Cards | Right Handed | Jet Black   | Recess Bell       |
| Ethan Reed    | Stink Bomb      | Gold Stars    | Left Handed  | Sandy Blond | Juice Box         |
| Maya Lin      | Silly String    | Library Cards | Left Handed  | Jet Black   | Juice Box         |
| Julia Vance   | Fake Snake      | Hall Passes   | Left Handed  | Sandy Blond | Juice Box         |
| Riley Cooper  | Silly String    | Gold Stars    | Left Handed  | Bright Red  | Gold Star Sticker |
| Kevin Hayes   | Fake Snake      | Library Cards | Left Handed  | Sandy Blond | Gold Star Sticker |

## CLUE 1 Rounding

The digital clock in the hallway rounded the time to the nearest ten minutes.

Solve each problem, then write its letter in every clue box that shows the same number.

|          |     |      |      |      |     |      |      |    |          |      |      |      |     |     |          |      |     |          |
|----------|-----|------|------|------|-----|------|------|----|----------|------|------|------|-----|-----|----------|------|-----|----------|
| <b>T</b> |     |      |      |      |     |      |      |    | <b>T</b> |      |      |      |     |     |          |      |     | <b>T</b> |
| 3700     | 230 | 700  | 170  | 4300 | 290 | 2900 | 500  | 50 | 3700     | 700  | 4300 | 3000 | 370 | 700 | 50       | 2900 | 370 | 3700     |
|          |     |      |      |      |     |      |      |    | <b>T</b> |      |      |      |     |     | <b>T</b> |      |     |          |
| 20       | 290 | 4300 | 4300 | 1300 | 70  | 90   | 2900 | 20 | 230      | 3700 | 110  | 20   | 500 | 700 | 3700     | 50   |     |          |

Round 3,743 to the nearest hundred  → **T**

Round 2,886 to the nearest hundred  → **N**

Round 71 to the nearest ten  → **L**

Round 46 to the nearest ten  → **S**

Round 735 to the nearest hundred  → **E**

Round 227 to the nearest ten  → **H**

Round 171 to the nearest ten  → **P**

Round 492 to the nearest hundred  → **K**

Round 4,283 to the nearest hundred  → **R**

Round 87 to the nearest ten  → **U**

Round 1,325 to the nearest hundred  → **Y**

Round 289 to the nearest ten  → **A**

Round 111 to the nearest ten  → **I**

Round 3,062 to the nearest thousand  → **D**

Round 24 to the nearest ten  → **C**

Round 366 to the nearest ten  → **O**

Scratch space:

## CLUE 2 Addition

We tallied up the total number of missing hall passes from each classroom.

Solve each problem, then write its letter in every clue box that shows the same number.

|              |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |              |
|--------------|------|------|------|------|--------------|------|------|------|------|------|------|------|------|------|------|------|--------------|
| <div>T</div> |      |      |      |      | <div>T</div> |      |      |      |      |      |      |      |      |      |      |      | <div>T</div> |
| 2485         | 5673 | 2359 | 6635 | 3556 | 2485         | 7294 | 2359 | 4855 | 4855 | 4855 | 8268 | 6635 | 8268 | 7702 | 2359 | 7655 | 2485         |

  

|      |      |      |      |      |      |      |      |      |              |      |      |
|------|------|------|------|------|------|------|------|------|--------------|------|------|
|      |      |      |      |      |      |      |      |      | <div>T</div> |      |      |
| 5673 | 8268 | 7294 | 2737 | 2359 | 2737 | 6635 | 6266 | 3556 | 2485         | 2359 | 6266 |

$1389 + 1096 = \square \rightarrow \text{T}$

$2833 + 2022 = \square \rightarrow \text{S}$

$2665 + 3008 = \square \rightarrow \text{H}$

$1148 + 1211 = \square \rightarrow \text{E}$

$2253 + 4382 = \square \rightarrow \text{W}$

$4436 + 3266 = \square \rightarrow \text{L}$

$1107 + 1630 = \square \rightarrow \text{D}$

$4193 + 2073 = \square \rightarrow \text{R}$

$5109 + 3159 = \square \rightarrow \text{A}$

$1544 + 2012 = \square \rightarrow \text{I}$

$4004 + 3290 = \square \rightarrow \text{N}$

$3013 + 4642 = \square \rightarrow \text{F}$

Scratch space:

**CLUE 3**
**Subtraction**

We subtracted the recovered library cards from the total missing stack.

Solve each problem, then write its letter in every clue box that shows the same number.

|              |              |             |              |             |             |             |              |             |              |             |             |             |             |             |              |      |
|--------------|--------------|-------------|--------------|-------------|-------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|------|
| <div>T</div> | <div></div>  | <div></div> | <div></div>  | <div></div> | <div></div> | <div></div> | <div></div>  | <div></div> | <div>T</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div>T</div> |      |
| 7629         | 4791         | 2259        | 5214         | 7112        | 2605        | 5567        | 8832         | 4548        | 7629         | 2259        | 7112        | 5505        | 4661        | 7629        |              |      |
| <div></div>  | <div></div>  | <div></div> | <div>T</div> | <div></div> | <div></div> | <div></div> | <div>T</div> | <div></div> | <div></div>  | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div>  |      |
| 5643         | 8727         | 4548        | 7629         | 7112        | 2605        | 7289        | 7629         | 2259        | 5643         | 2131        | 1422        | 2605        | 5505        | 4661        | 4805         | 5643 |
| <div></div>  | <div>T</div> | <div></div> | <div></div>  |             |             |             |              |             |              |             |             |             |             |             |              |      |
| 4548         | 7629         | 2605        | 7112         |             |             |             |              |             |              |             |             |             |             |             |              |      |

|                                          |                                           |                                           |
|------------------------------------------|-------------------------------------------|-------------------------------------------|
| 8807 - 1178 = <div></div> → <div>T</div> | 4952 - 3530 = <div></div> → <div>Y</div>  | 11291 - 4179 = <div></div> → <div>R</div> |
| 6994 - 2189 = <div></div> → <div>L</div> | 7781 - 2138 = <div></div> → <div>D</div>  | 12039 - 3207 = <div></div> → <div>K</div> |
| 4033 - 1428 = <div></div> → <div>A</div> | 5369 - 3110 = <div></div> → <div>E</div>  | 5282 - 621 = <div></div> → <div>O</div>   |
| 7562 - 273 = <div></div> → <div>C</div>  | 5589 - 375 = <div></div> → <div>P</div>   | 11306 - 2579 = <div></div> → <div>I</div> |
| 9702 - 4135 = <div></div> → <div>N</div> | 10033 - 4528 = <div></div> → <div>G</div> | 6558 - 1767 = <div></div> → <div>H</div>  |
| 9403 - 4855 = <div></div> → <div>S</div> | 2811 - 680 = <div></div> → <div>B</div>   |                                           |

Scratch space:

## CLUE 4

## Multiplication facts (1-12)

The teacher organized the desk trays into equal rows to count the evidence.

Solve each problem, then write its letter in every clue box that shows the same number.

|    |    |    |    |    |    |    |    |    |    |     |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|
| S  |    |    |    |    |    |    |    |    |    |     |    |    |    |    |    | S  |
| 49 | 50 | 77 | 44 | 15 | 9  | 88 | 32 | 77 | 44 | 72  | 50 | 28 | 20 | 56 | 50 | 49 |
|    |    |    |    |    |    |    |    |    |    |     |    |    |    |    |    |    |
| 5  | 50 | 27 | 18 | 72 | 30 | 32 | 77 | 30 | 72 | 100 | 88 | 50 | 30 | 5  | 72 |    |

$7 \times 7 = \square \rightarrow \text{S}$

$11 \times 8 = \square \rightarrow \text{L}$

$9 \times 8 = \square \rightarrow \text{H}$

$10 \times 10 = \square \rightarrow \text{E}$

$3 \times 9 = \square \rightarrow \text{U}$

$11 \times 4 = \square \rightarrow \text{D}$

$4 \times 8 = \square \rightarrow \text{O}$

$5 \times 6 = \square \rightarrow \text{T}$

$10 \times 2 = \square \rightarrow \text{R}$

$7 \times 4 = \square \rightarrow \text{I}$

$3 \times 6 = \square \rightarrow \text{G}$

$9 \times 1 = \square \rightarrow \text{B}$

$3 \times 5 = \square \rightarrow \text{Y}$

$10 \times 5 = \square \rightarrow \text{A}$

$7 \times 8 = \square \rightarrow \text{W}$

$5 \times 1 = \square \rightarrow \text{C}$

$7 \times 11 = \square \rightarrow \text{N}$

Scratch space:

**CLUE 5****Division facts (1-12) - the last clue**

We split the clues equally among the student detectives to analyze.

First solve each problem. Then find each answer in the numbered list below and cross that sentence out. One sentence will be left - that is exactly what the villain did!

**Step 1 - solve these:**

$9 \div 1 = \boxed{\phantom{00}}$

$10 \div 10 = \boxed{\phantom{00}}$

$8 \div 4 = \boxed{\phantom{00}}$

$60 \div 12 = \boxed{\phantom{00}}$

$84 \div 7 = \boxed{\phantom{00}}$

$33 \div 11 = \boxed{\phantom{00}}$

$80 \div 8 = \boxed{\phantom{00}}$

$63 \div 9 = \boxed{\phantom{00}}$

$99 \div 9 = \boxed{\phantom{00}}$

$24 \div 4 = \boxed{\phantom{00}}$

$96 \div 12 = \boxed{\phantom{00}}$

**Step 2 - cross out the sentence with each answer:**

1. The villain placed a rubber fake snake, then took a pile of library cards.
2. The villain sprayed sticky silly string, then swiped a stack of hall passes.
3. The villain set off a smelly stink bomb, then stole a sheet of gold stars.
4. The villain placed a rubber fake snake, then stole a sheet of gold stars.
5. The villain dropped a noisy whoopee cushion, then snapped up lunch tickets.
6. The villain set off a smelly stink bomb, then swiped a stack of hall passes.
7. The villain sprayed sticky silly string, then took a pile of library cards.
8. The villain sprinkled itchy itching powder, then took a pile of library cards.
9. The villain dropped a noisy whoopee cushion, then took a pile of library cards.
10. The villain placed a rubber fake snake, then swiped a stack of hall passes.
11. The villain placed a rubber fake snake, then snapped up lunch tickets.
12. The villain set off a smelly stink bomb, then pocketed a box of box tops.

# Answer Key

## The Great Schoolhouse Scramble

### Culprit: Ian Gomez

Fake Snake · Gold Stars · Left Handed · Sandy Blond · Gold Star Sticker

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

#### Clue 1 (Rounding): "THE PRANKSTER DOES NOT CARRY LUNCH TICKETS"

Round 3,743 to the nearest hundred = 3700 (T) · Round 2,886 to the nearest hundred = 2900 (N) · Round 71 to the nearest ten = 70 (L) · Round 46 to the nearest ten = 50 (S) · Round 735 to the nearest hundred = 700 (E) · Round 227 to the nearest ten = 230 (H) · Round 171 to the nearest ten = 170 (P) · Round 492 to the nearest hundred = 500 (K) · Round 4,283 to the nearest hundred = 4300 (R) · Round 87 to the nearest ten = 90 (U) · Round 1,325 to the nearest hundred = 1300 (Y) · Round 289 to the nearest ten = 290 (A) · Round 111 to the nearest ten = 110 (I) · Round 3,062 to the nearest thousand = 3000 (D) · Round 24 to the nearest ten = 20 (C) · Round 366 to the nearest ten = 370 (O)

#### Clue 2 (Addition): "THE WITNESS SAW A LEFT HANDED WRITER"

$1389 + 1096 = 2485$  (T) ·  $2833 + 2022 = 4855$  (S) ·  $2665 + 3008 = 5673$  (H) ·  $1148 + 1211 = 2359$  (E) ·  $2253 + 4382 = 6635$  (W) ·  $4436 + 3266 = 7702$  (L) ·  $1107 + 1630 = 2737$  (D) ·  $4193 + 2073 = 6266$  (R) ·  $5109 + 3159 = 8268$  (A) ·  $1544 + 2012 = 3556$  (I) ·  $4004 + 3290 = 7294$  (N) ·  $3013 + 4642 = 7655$  (F)

#### Clue 3 (Subtraction): "THE PRANKSTER GOT DISTRACTED BY A GOLD STAR"

$8807 - 1178 = 7629$  (T) ·  $4952 - 3530 = 1422$  (Y) ·  $11291 - 4179 = 7112$  (R) ·  $6994 - 2189 = 4805$  (L) ·  $7781 - 2138 = 5643$  (D) ·  $12039 - 3207 = 8832$  (K) ·  $4033 - 1428 = 2605$  (A) ·  $5369 - 3110 = 2259$  (E) ·  $5282 - 621 = 4661$  (O) ·  $7562 - 273 = 7289$  (C) ·  $5589 - 375 = 5214$  (P) ·  $11306 - 2579 = 8727$  (I) ·  $9702 - 4135 = 5567$  (N) ·  $10033 - 4528 = 5505$  (G) ·  $6558 - 1767 = 4791$  (H) ·  $9403 - 4855 = 4548$  (S) ·  $2811 - 680 = 2131$  (B)

#### Clue 4 (Multiplication facts (1-12)): "SANDY BLOND HAIR WAS CAUGHT ON THE LATCH"

$7 \times 7 = 49$  (S) ·  $11 \times 8 = 88$  (L) ·  $9 \times 8 = 72$  (H) ·  $10 \times 10 = 100$  (E) ·  $3 \times 9 = 27$  (U) ·  $11 \times 4 = 44$  (D) ·  $4 \times 8 = 32$  (O) ·  $5 \times 6 = 30$  (T) ·  $10 \times 2 = 20$  (R) ·  $7 \times 4 = 28$  (I) ·  $3 \times 6 = 18$  (G) ·  $9 \times 1 = 9$  (B) ·  $3 \times 5 = 15$  (Y) ·  $10 \times 5 = 50$  (A) ·  $7 \times 8 = 56$  (W) ·  $5 \times 1 = 5$  (C) ·  $7 \times 11 = 77$  (N)

#### Clue 5 (Division facts (1-12)): surviving statement is box 4 → Ian Gomez

$9 \div 1 = 9$  ·  $10 \div 10 = 1$  ·  $8 \div 4 = 2$  ·  $60 \div 12 = 5$  ·  $84 \div 7 = 12$  ·  $33 \div 11 = 3$  ·  $80 \div 8 = 10$  ·  $63 \div 9 = 7$  ·  $99 \div 9 = 11$  ·  $24 \div 4 = 6$  ·  $96 \div 12 = 8$