



# The Great Homework Folder Mix-Up

Grade 6 math · Percentages, Exponents, Order of operations, Multiplication, Division · Reading level grades 1-2

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

Oh no! Someone mixed up all the homework folders in the main office. The School Principal needs your help to catch the Hallway Prankster. Follow the clues and do the math to save the day!

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 Hallway Prankster is** \_\_\_\_\_

## Possible suspects

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

| NAME             | HALLWAY SKILL                   | POCKET ITEM              | WRITING HAND           | HEAD ACCESSORY          | DISTRACTION                |
|------------------|---------------------------------|--------------------------|------------------------|-------------------------|----------------------------|
| Penny Peterson   | super chalkboard erasing        | red laser pointer        | writes with right hand | yellow star hairclip    | smelly dirty gym socks     |
| Junie Jones      | perfect paper airplane throwing | shiny gold star stickers | writes with right hand | shiny blue headband     | smelly dirty gym socks     |
| Linus VanPelt    | neat locker organizing          | wood yardstick ruler     | writes with left hand  | yellow star hairclip    | squeaky whiteboard markers |
| Matilda Wormwood | quiet library tiptoeing         | wood yardstick ruler     | writes with left hand  | shiny blue headband     | smelly dirty gym socks     |
| Buster Baxter    | lightning speed hall walking    | red laser pointer        | writes with left hand  | yellow star hairclip    | squeaky whiteboard markers |
| Mercy Watson     | perfect paper airplane throwing | red laser pointer        | writes with left hand  | yellow star hairclip    | smelly dirty gym socks     |
| Principal Bob    | lightning speed hall walking    | wood yardstick ruler     | writes with left hand  | bright red baseball cap | squeaky whiteboard markers |
| Judy Moody       | super chalkboard erasing        | wood yardstick ruler     | writes with right hand | yellow star hairclip    | squeaky whiteboard markers |
| Lucy VanPelt     | super chalkboard erasing        | wood yardstick ruler     | writes with left hand  | bright red baseball cap | smelly dirty gym socks     |
| Nurse Joy        | super chalkboard erasing        | wood yardstick ruler     | writes with right hand | shiny blue headband     | sticky wet cleaning sponge |
| Coach Dan        | perfect paper airplane throwing | wood yardstick ruler     | writes with left hand  | yellow star hairclip    | squeaky whiteboard markers |
| Ramona Quimby    | lightning speed hall walking    | red laser pointer        | writes with right hand | yellow star hairclip    | squeaky whiteboard markers |
| Charlie Brown    | neat locker organizing          | sparkly glitter glue     | writes with left hand  | yellow star hairclip    | squeaky whiteboard markers |
| Greg Heffley     | lightning speed hall walking    | sparkly glitter glue     | writes with right hand | yellow star hairclip    | squeaky whiteboard markers |
| Francine Frensky | neat locker organizing          | red laser pointer        | writes with right hand | shiny blue headband     | sticky wet cleaning sponge |
| Miss Frizzle     | super chalkboard erasing        | wood yardstick ruler     | writes with left hand  | yellow star hairclip    | sticky wet cleaning sponge |
| Stink Moody      | perfect paper airplane throwing | shiny gold star stickers | writes with left hand  | yellow star hairclip    | sticky wet cleaning sponge |
| Billy Miller     | quiet library tiptoeing         | red laser pointer        | writes with right hand | shiny blue headband     | squeaky whiteboard markers |
| Nate Wright      | lightning speed hall walking    | shiny gold star stickers | writes with right hand | shiny blue headband     | smelly dirty gym socks     |
| Sally Brown      | perfect paper airplane throwing | loud silver whistle      | writes with right hand | bright red baseball cap | smelly dirty gym socks     |
| Janitor Joe      | super chalkboard erasing        | loud silver whistle      | writes with left hand  | yellow star hairclip    | squeaky whiteboard markers |

## CLUE 1 Percentages

We look at the grade book. The teacher wrote down the scores as a part of one hundred. Let us find the percentage!

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

|    |    |   |    |    |    |    |    |    |    |    |   |   |   |    |   |    |
|----|----|---|----|----|----|----|----|----|----|----|---|---|---|----|---|----|
| T  |    |   |    |    |    |    |    |    |    |    |   |   |   |    |   | T  |
| 15 | 19 | 4 | 45 | 10 | 28 | 28 | 38 | 10 | 31 | 27 | 9 | 4 | 5 | 31 | 9 | 15 |

  

|    |    |    |   |    |    |   |    |    |    |    |    |   |    |    |   |  |
|----|----|----|---|----|----|---|----|----|----|----|----|---|----|----|---|--|
|    |    |    |   |    |    |   |    |    |    |    |    |   |    |    |   |  |
| 19 | 38 | 45 | 4 | 38 | 28 | 9 | 24 | 27 | 30 | 19 | 10 | 5 | 15 | 28 | 4 |  |

$60\% \text{ of } 25 = \square \rightarrow \boxed{\text{T}}$

$20\% \text{ of } 155 = \square \rightarrow \boxed{\text{N}}$

$25\% \text{ of } 108 = \square \rightarrow \boxed{\text{D}}$

$60\% \text{ of } 50 = \square \rightarrow \boxed{\text{W}}$

$10\% \text{ of } 90 = \square \rightarrow \boxed{\text{O}}$

$5\% \text{ of } 200 = \square \rightarrow \boxed{\text{I}}$

$5\% \text{ of } 560 = \square \rightarrow \boxed{\text{L}}$

$20\% \text{ of } 20 = \square \rightarrow \boxed{\text{E}}$

$60\% \text{ of } 75 = \square \rightarrow \boxed{\text{V}}$

$20\% \text{ of } 190 = \square \rightarrow \boxed{\text{A}}$

$50\% \text{ of } 10 = \square \rightarrow \boxed{\text{S}}$

$10\% \text{ of } 190 = \square \rightarrow \boxed{\text{H}}$

$25\% \text{ of } 96 = \square \rightarrow \boxed{\text{U}}$

Scratch space:

## CLUE 2

## Exponents

Look at this box of grid paper. The squares multiply very fast when we stack them up. Let us find the power!

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| W   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |     |
| 64  | 27  | 256 | 9   | 216 | 169 | 121 | 128 | 361 | 27  | 169 | 4   | 125 | 343 | 400 | 27 | 343 | 121 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |     |
| 125 | 169 | 8   | 400 | 27  | 343 | 27  | 256 | 8   | 400 | 128 | 169 | 121 |     |     |    |     |     |

$8^2 = \square \rightarrow \boxed{W}$

$3^2 = \square \rightarrow \boxed{O}$

$5^3 = \square \rightarrow \boxed{I}$

$2^3 = \square \rightarrow \boxed{T}$

$19^2 = \square \rightarrow \boxed{P}$

$16^2 = \square \rightarrow \boxed{F}$

$2^2 = \square \rightarrow \boxed{C}$

$11^2 = \square \rightarrow \boxed{D}$

$3^3 = \square \rightarrow \boxed{E}$

$6^3 = \square \rightarrow \boxed{U}$

$2^7 = \square \rightarrow \boxed{A}$

$7^3 = \square \rightarrow \boxed{L}$

$13^2 = \square \rightarrow \boxed{N}$

$20^2 = \square \rightarrow \boxed{H}$

Scratch space:

## CLUE 3

## Order of operations

First we must pack our bags. Next we zip them. We must do things in the right order to get the key!

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

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| T  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 38 | 17 | 75 | 42 | 58 | 9  | 75 | 73 | 54 | 71 | 62 | 73 | 30 | 54 | 75 | 30 | 42 |
|    | T  |    |    |    |    |    | T  |    |    |    |    |    |    |    | T  |    |
| 42 | 38 | 45 | 12 | 12 | 75 | 26 | 38 | 17 | 75 | 12 | 30 | 73 | 47 | 54 | 42 | 38 |

$24 + 7 \times 2 = \square \rightarrow \boxed{\text{T}}$

$64 + 3 \times 3 = \square \rightarrow \boxed{\text{A}}$

$15 + 5 \times 6 = \square \rightarrow \boxed{\text{O}}$

$6 \times 7 - 25 = \square \rightarrow \boxed{\text{H}}$

$10 \times 7 - 23 = \square \rightarrow \boxed{\text{N}}$

$17 + 6 \times 9 = \square \rightarrow \boxed{\text{Y}}$

$3 \times 9 - 1 = \square \rightarrow \boxed{\text{D}}$

$5 \times 7 - 5 = \square \rightarrow \boxed{\text{R}}$

$9 \times 9 - 6 = \square \rightarrow \boxed{\text{E}}$

$7 \times 4 - 19 = \square \rightarrow \boxed{\text{U}}$

$2 + 5 \times 2 = \square \rightarrow \boxed{\text{P}}$

$22 + 5 \times 4 = \square \rightarrow \boxed{\text{S}}$

$38 + 4 \times 4 = \square \rightarrow \boxed{\text{K}}$

$44 + 2 \times 9 = \square \rightarrow \boxed{\text{M}}$

$12 \times 7 - 26 = \square \rightarrow \boxed{\text{Q}}$

Scratch space:

## Multiplication facts (1-12)

The crayons are packed in equal rows on the shelf. We can multiply the rows to count them all fast!

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

1 5 56 88 80 121 66 1 35 88 56 80 80 121 36 66 1 35 44

5 35 33 44 55 80 33 45

1 5 56 88 80 121 66 1 35 88 56 80 80 121 36 66 1 35 44

$1 \times 1 = \boxed{\phantom{000}} \rightarrow \boxed{\mathbf{T}}$

$11 \times 4 = \boxed{\phantom{00}} \rightarrow \boxed{\text{R}}$

$5 \times 7 = \boxed{\phantom{00}} \rightarrow \boxed{\text{A}}$

$11 \times 8 = \boxed{\phantom{00}} \rightarrow \boxed{\text{Y}}$

$1 \times 5 = \boxed{\phantom{00}} \rightarrow \boxed{\text{H}}$

$11 \times 11 = \boxed{\phantom{00}} \rightarrow \boxed{0}$

$11 \times 5 = \square \rightarrow \mathbf{C}$

$7 \times 8 = \square \rightarrow \boxed{\mathbf{E}}$

$5 \times 9 = \boxed{\phantom{00}} \rightarrow \boxed{\text{P}}$

$3 \times 12 = \square \rightarrow \boxed{\mathbf{W}}$

$10 \times 8 = \square \rightarrow \boxed{\text{L}}$

$6 \times 11 = \square \rightarrow \boxed{\text{S}}$

$11 \times 3 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

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

We need to share the stickers equally among our friends. Let us divide them up so everyone gets the same!

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:**

$120 \div 12 = \boxed{\phantom{00}}$

$54 \div 6 = \boxed{\phantom{00}}$

$120 \div 10 = \boxed{\phantom{00}}$

$72 \div 9 = \boxed{\phantom{00}}$

$30 \div 10 = \boxed{\phantom{00}}$

$42 \div 6 = \boxed{\phantom{00}}$

$48 \div 12 = \boxed{\phantom{00}}$

$40 \div 8 = \boxed{\phantom{00}}$

$20 \div 10 = \boxed{\phantom{00}}$

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

$36 \div 6 = \boxed{\phantom{00}}$

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

1. The villain sped down the quiet hallway, then blew the loud silver whistle.
2. The villain threw a neat paper airplane, then flashed the red laser pointer.
3. The villain cleaned up the messy lockers, then flashed the red laser pointer.
4. The villain erased the giant chalkboard, then flashed the red laser pointer.
5. The villain erased the giant chalkboard, then blew the loud silver whistle.
6. The villain threw a neat paper airplane, then dropped the shiny gold star stickers.
7. The villain sped down the quiet hallway, then spilled the sparkly glitter glue.
8. The villain cleaned up the messy lockers, then dropped the shiny gold star stickers.
9. The villain cleaned up the messy lockers, then spilled the sparkly glitter glue.
10. The villain sped down the quiet hallway, then flashed the red laser pointer.
11. The villain cleaned up the messy lockers, then measured with the wood yardstick ruler.
12. The villain threw a neat paper airplane, then measured with the wood yardstick ruler.

# Answer Key

## The Great Homework Folder Mix-Up

### Culprit: Linus VanPelt

neat locker organizing · wood yardstick ruler · writes with left hand · yellow star hairclip · squeaky whiteboard markers

Trail: Start 21 → Clue 1 19 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

#### Clue 1 (Percentages): "THE VILLAIN DOES NOT HAVE A LOUD WHISTLE"

60% of 25 = 15 (T) · 20% of 155 = 31 (N) · 25% of 108 = 27 (D) · 60% of 50 = 30 (W) · 10% of 90 = 9 (O) · 5% of 200 = 10 (I) · 5% of 560 = 28 (L) · 20% of 20 = 4 (E) · 60% of 75 = 45 (V) · 20% of 190 = 38 (A) · 50% of 10 = 5 (S) · 10% of 190 = 19 (H) · 25% of 96 = 24 (U)

#### Clue 2 (Exponents): "WE FOUND A PENCIL HELD IN THE LEFT HAND"

$8^2 = 64$  (W) ·  $3^2 = 9$  (O) ·  $5^3 = 125$  (I) ·  $2^3 = 8$  (T) ·  $19^2 = 361$  (P) ·  $16^2 = 256$  (F) ·  $2^2 = 4$  (C) ·  $11^2 = 121$  (D) ·  $3^3 = 27$  (E) ·  $6^3 = 216$  (U) ·  $2^7 = 128$  (A) ·  $7^3 = 343$  (L) ·  $13^2 = 169$  (N) ·  $20^2 = 400$  (H)

#### Clue 3 (Order of operations): "THE SQUEAKY MARKERS STOPPED THE PRANKSTER"

$24 + 7 \times 2 = 38$  (T) ·  $64 + 3 \times 3 = 73$  (A) ·  $15 + 5 \times 6 = 45$  (O) ·  $6 \times 7 - 25 = 17$  (H) ·  $10 \times 7 - 23 = 47$  (N) ·  $17 + 6 \times 9 = 71$  (Y) ·  $3 \times 9 - 1 = 26$  (D) ·  $5 \times 7 - 5 = 30$  (R) ·  $9 \times 9 - 6 = 75$  (E) ·  $7 \times 4 - 19 = 9$  (U) ·  $2 + 5 \times 2 = 12$  (P) ·  $22 + 5 \times 4 = 42$  (S) ·  $38 + 4 \times 4 = 54$  (K) ·  $44 + 2 \times 9 = 62$  (M) ·  $12 \times 7 - 26 = 58$  (Q)

#### Clue 4 (Multiplication facts (1-12)): "THEY LOST A YELLOW STAR HAIRCLIP"

$1 \times 1 = 1$  (T) ·  $11 \times 4 = 44$  (R) ·  $5 \times 7 = 35$  (A) ·  $11 \times 8 = 88$  (Y) ·  $1 \times 5 = 5$  (H) ·  $11 \times 11 = 121$  (O) ·  $11 \times 5 = 55$  (C) ·  $7 \times 8 = 56$  (E) ·  $5 \times 9 = 45$  (P) ·  $3 \times 12 = 36$  (W) ·  $10 \times 8 = 80$  (L) ·  $6 \times 11 = 66$  (S) ·  $11 \times 3 = 33$  (I)

#### Clue 5 (Division facts (1-12)): surviving statement is box 11 → Linus VanPelt

$120 \div 12 = 10$  ·  $54 \div 6 = 9$  ·  $120 \div 10 = 12$  ·  $72 \div 9 = 8$  ·  $30 \div 10 = 3$  ·  $42 \div 6 = 7$  ·  $48 \div 12 = 4$  ·  $40 \div 8 = 5$  ·  $20 \div 10 = 2$  ·  $7 \div 7 = 1$  ·  $36 \div 6 = 6$