



# The Golden Grip Trophy Mystery

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

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

The legendary Golden Grip Trophy has vanished right before the final event! A sneaky thief snuck into the locker rooms while everyone was practicing their handstands. Coach Kelly needs your help to look for clues, solve the math puzzles, and spot the culprit before the awards ceremony begins!

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 The Chalk Thief is** \_\_\_\_\_

## Possible suspects

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

| NAME     | FAVORITE EVENT | LUCKY GEAR          | LANDING STANCE  | HAIR STYLE     | MAJOR DISTRACTION |
|----------|----------------|---------------------|-----------------|----------------|-------------------|
| Nadia    | Vault          | Springy Shoes       | Right Foot Lead | Braided Bun    | Slippery Mats     |
| Aly      | Pommel Horse   | Glitter Wristbands  | Right Foot Lead | Braided Bun    | Loud Music        |
| Yul      | Balance Beam   | Springy Shoes       | Right Foot Lead | High Ponytail  | Slippery Mats     |
| Jordan   | Uneven Bars    | Super-Grip Chalk    | Right Foot Lead | High Ponytail  | Sticky Tape       |
| Stephen  | Pommel Horse   | Springy Shoes       | Left Foot Lead  | Braided Bun    | Sticky Tape       |
| Suni     | Vault          | Holographic Leotard | Right Foot Lead | Glittery Pixie | Sticky Tape       |
| Paul     | Balance Beam   | Holographic Leotard | Right Foot Lead | High Ponytail  | Slippery Mats     |
| Mitch    | Vault          | Springy Shoes       | Right Foot Lead | High Ponytail  | Loud Music        |
| Jonathan | Vault          | Neon Ribbon         | Right Foot Lead | High Ponytail  | Slippery Mats     |
| Mary Lou | Floor Routine  | Holographic Leotard | Right Foot Lead | Glittery Pixie | Loud Music        |
| Fred     | Balance Beam   | Super-Grip Chalk    | Right Foot Lead | Glittery Pixie | Slippery Mats     |
| Shawn    | Floor Routine  | Neon Ribbon         | Right Foot Lead | High Ponytail  | Loud Music        |
| Vitaly   | Floor Routine  | Holographic Leotard | Right Foot Lead | Glittery Pixie | Slippery Mats     |
| Gabby    | Floor Routine  | Holographic Leotard | Right Foot Lead | High Ponytail  | Loud Music        |
| Nastia   | Vault          | Super-Grip Chalk    | Right Foot Lead | High Ponytail  | Loud Music        |
| Laurie   | Floor Routine  | Holographic Leotard | Left Foot Lead  | Glittery Pixie | Slippery Mats     |
| Grace    | Vault          | Holographic Leotard | Left Foot Lead  | High Ponytail  | Loud Music        |
| Shannon  | Pommel Horse   | Springy Shoes       | Left Foot Lead  | High Ponytail  | Loud Music        |
| Asher    | Vault          | Holographic Leotard | Right Foot Lead | High Ponytail  | Loud Music        |
| Kohei    | Balance Beam   | Holographic Leotard | Left Foot Lead  | Glittery Pixie | Loud Music        |
| Brody    | Balance Beam   | Super-Grip Chalk    | Left Foot Lead  | Braided Bun    | Sticky Tape       |

## CLUE 1

## Multiplication facts (1-12)

We find a clue on the storage shelves. The chalk boxes are stacked in tidy rows. We multiply the rows to find how many we have and spot a secret note tucked behind them!

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

|    |     |    |    |    |   |    |    |   |    |    |    |    |    |   |    |   |    |  |  |
|----|-----|----|----|----|---|----|----|---|----|----|----|----|----|---|----|---|----|--|--|
| V  |     |    |    |    |   |    |    |   |    |    |    |    |    |   |    |   |    |  |  |
| 30 | 2   | 40 | 40 | 4  | 2 | 36 | 14 | 5 | 80 | 35 | 36 | 5  | 44 | 9 | 80 | 4 | 25 |  |  |
|    |     |    |    |    |   |    |    |   |    |    |    |    |    |   |    |   |    |  |  |
| 44 | 121 | 80 | 36 | 80 | 5 | 36 | 25 | 2 | 77 | 77 | 5  | 36 |    |   |    |   |    |  |  |

$10 \times 3 = \square \rightarrow \boxed{\text{V}}$

$10 \times 4 = \square \rightarrow \boxed{\text{L}}$

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

$1 \times 2 = \square \rightarrow \boxed{\text{I}}$

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

$11 \times 11 = \square \rightarrow \boxed{\text{H}}$

$7 \times 11 = \square \rightarrow \boxed{\text{B}}$

$5 \times 1 = \square \rightarrow \boxed{\text{O}}$

$1 \times 9 = \square \rightarrow \boxed{\text{W}}$

$3 \times 12 = \square \rightarrow \boxed{\text{N}}$

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

$4 \times 11 = \square \rightarrow \boxed{\text{T}}$

$1 \times 4 = \square \rightarrow \boxed{\text{A}}$

$7 \times 2 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

## CLUE 2 Addition

A judge dropped a stack of scoring sheets on the floor! We help gather them and add up all the bonus points to unlock a locker that holds another clue.

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

|                              |                             |                             |                             |                             |                              |                              |                             |                             |                             |                              |                             |                             |                             |                             |                             |                              |
|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| <div>T</div> <div>6605</div> | <div></div> <div>6809</div> | <div></div> <div>5444</div> | <div></div> <div>4756</div> | <div></div> <div>4165</div> | <div></div> <div>2446</div>  | <div>T</div> <div>6809</div> | <div></div> <div>6605</div> | <div></div> <div>4934</div> | <div></div> <div>5468</div> | <div>T</div> <div>5468</div> | <div></div> <div>6605</div> | <div></div> <div>4549</div> | <div></div> <div>4756</div> | <div></div> <div>4165</div> | <div></div> <div>2393</div> | <div>T</div> <div>6605</div> |
| <div></div> <div>6005</div>  | <div></div> <div>9883</div> | <div></div> <div>9603</div> | <div></div> <div>5468</div> | <div></div> <div>2393</div> | <div>T</div> <div>6605</div> | <div></div> <div>6809</div>  | <div></div> <div>5444</div> | <div></div> <div>7126</div> | <div></div> <div>9883</div> | <div>T</div> <div>6605</div> |                             |                             |                             |                             |                             |                              |

|                                              |                                              |                                              |
|----------------------------------------------|----------------------------------------------|----------------------------------------------|
| $2213 + 4392 = \square \rightarrow \text{T}$ | $2830 + 1926 = \square \rightarrow \text{R}$ | $1451 + 3098 = \square \rightarrow \text{P}$ |
| $2988 + 3017 = \square \rightarrow \text{W}$ | $5729 + 4154 = \square \rightarrow \text{A}$ | $3268 + 6335 = \square \rightarrow \text{S}$ |
| $1815 + 2350 = \square \rightarrow \text{I}$ | $1578 + 3356 = \square \rightarrow \text{F}$ | $2966 + 4160 = \square \rightarrow \text{M}$ |
| $1350 + 1096 = \square \rightarrow \text{G}$ | $2009 + 3435 = \square \rightarrow \text{E}$ | $966 + 1427 = \square \rightarrow \text{N}$  |
| $4571 + 2238 = \square \rightarrow \text{H}$ | $2059 + 3409 = \square \rightarrow \text{O}$ |                                              |

Scratch space:

**CLUE 3**

The team is missing some of their special practice hoops. We subtract the hoops we found from the starting total to see how many were stolen, leading us to a clue in the equipment room.

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

5557 7187 7459 7085 6055 8569 4519 2985 8569 2749 7794 6574 2985 3309 4519 7459

5557 7187 7459 2985 6574 6055 3597 7459 3578 5557 7187 7459 7794 3578 7459 3309 3578 2749

$$8856 - 3299 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{T}}$$

$$11128 - 3941 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{H}}$$

$$7856 - 771 = \boxed{\phantom{000}} \rightarrow \boxed{\text{L}}$$

$$8626 - 832 = \boxed{\phantom{000}} \rightarrow \boxed{\text{I}}$$

$$6686 - 3937 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{S}}$$

$$4561 - 983 = \boxed{\phantom{000}} \rightarrow \boxed{\text{R}}$$

$$5130 - 2145 = \boxed{\phantom{000}} \rightarrow \boxed{\text{M}}$$

$7737 - 278 = \boxed{\phantom{000}} \rightarrow \boxed{\text{E}}$

$$6549 - 2030 = \boxed{\phantom{000}} \rightarrow \boxed{\text{D}}$$

$$12655 - 4086 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{U}}$$

$$7541 - 4232 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{A}}$$

3940 - 343 =  →

$11104 - 4530 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{C}}$

$$6376 - 321 = \boxed{\phantom{0000}} \rightarrow \boxed{0}$$

Scratch space:

## CLUE 4 Rounding

The digital timer on the scoreboard is broken and only displays rounded numbers. We round the seconds to the nearest ten to decode the secret security camera time stamp!

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

|          |      |      |      |    |     |     |      |      |     |     |      |      |    |      |     |      |      |
|----------|------|------|------|----|-----|-----|------|------|-----|-----|------|------|----|------|-----|------|------|
| <b>F</b> |      |      |      |    |     |     |      |      |     |     |      |      |    |      |     |      |      |
| 2900     | 2300 | 5000 | 4300 | 30 | 230 | 500 | 3700 | 3000 | 500 | 170 | 2300 | 4300 | 90 | 9000 | 230 | 3700 | 1700 |

  

|    |     |      |    |      |      |      |     |     |          |      |     |     |     |      |      |
|----|-----|------|----|------|------|------|-----|-----|----------|------|-----|-----|-----|------|------|
|    |     |      |    |      |      |      |     |     | <b>F</b> |      |     |     |     |      |      |
| 20 | 230 | 4300 | 30 | 3700 | 4300 | 9000 | 500 | 900 | 2900     | 2300 | 230 | 370 | 170 | 3700 | 9000 |

Round 2,882 to the nearest hundred  → **F**

Round 4,339 to the nearest hundred  → **N**

Round 370 to the nearest ten  → **M**

Round 26 to the nearest ten  → **D**

Round 170 to the nearest ten  → **P**

Round 22 to the nearest ten  → **B**

Round 3,026 to the nearest thousand  → **G**

Round 882 to the nearest hundred  → **E**

Round 227 to the nearest ten  → **A**

Round 1,674 to the nearest hundred  → **L**

Round 3,673 to the nearest hundred  → **I**

Round 2,310 to the nearest hundred  → **O**

Round 479 to the nearest hundred  → **H**

Round 86 to the nearest ten  → **Y**

Round 4,757 to the nearest thousand  → **U**

Round 9,285 to the nearest thousand  → **T**

Scratch space:

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

The coach wants to share a big bag of energy bars equally among the gym members. We divide the snacks to find out how many each gymnast gets, and we spot a clue written on the box!

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:**

$28 \div 7 = \boxed{\phantom{00}}$

$24 \div 12 = \boxed{\phantom{00}}$

$70 \div 10 = \boxed{\phantom{00}}$

$3 \div 1 = \boxed{\phantom{00}}$

$50 \div 10 = \boxed{\phantom{00}}$

$33 \div 3 = \boxed{\phantom{00}}$

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

$36 \div 3 = \boxed{\phantom{00}}$

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

$100 \div 10 = \boxed{\phantom{00}}$

$54 \div 9 = \boxed{\phantom{00}}$

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

1. The villain balanced on the beam, then bounced high on springy shoes.
2. The villain leaped across the floor, then shined bright in their holographic leotard.
3. The villain leaped across the floor, then twirled a bright neon ribbon.
4. The villain vaulted over the horse, then rubbed on super grip chalk.
5. The villain vaulted over the horse, then twirled a bright neon ribbon.
6. The villain swung on the uneven bars, then shined bright in their holographic leotard.
7. The villain vaulted over the horse, then shined bright in their holographic leotard.
8. The villain vaulted over the horse, then bounced high on springy shoes.
9. The villain swung on the uneven bars, then twirled a bright neon ribbon.
10. The villain leaped across the floor, then shook their glitter wristbands.
11. The villain balanced on the beam, then shined bright in their holographic leotard.
12. The villain spun on the pommel horse, then rubbed on super grip chalk.

# Answer Key

## The Golden Grip Trophy Mystery

### Culprit: Mitch

Vault · Springy Shoes · Right Foot Lead · High Ponytail · Loud Music

Trail: Start 21 → Clue 1 19 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

### Clue 1 (Multiplication facts (1-12)): "VILLAIN DOES NOT WEAR THE NEON RIBBON"

$10 \times 3 = 30$  (V) ·  $10 \times 4 = 40$  (L) ·  $5 \times 5 = 25$  (R) ·  $1 \times 2 = 2$  (I) ·  $5 \times 7 = 35$  (S) ·  $11 \times 11 = 121$  (H) ·  $7 \times 11 = 77$  (B) ·  $5 \times 1 = 5$  (O) ·  $1 \times 9 = 9$  (W) ·  $3 \times 12 = 36$  (N) ·  $8 \times 10 = 80$  (E) ·  $4 \times 11 = 44$  (T) ·  $1 \times 4 = 4$  (A) ·  $7 \times 2 = 14$  (D)

### Clue 2 (Addition): "THE RIGHT FOOT PRINT WAS ON THE MAT"

$2213 + 4392 = 6605$  (T) ·  $2830 + 1926 = 4756$  (R) ·  $1451 + 3098 = 4549$  (P) ·  $2988 + 3017 = 6005$  (W) ·  $5729 + 4154 = 9883$  (A) ·  $3268 + 6335 = 9603$  (S) ·  $1815 + 2350 = 4165$  (I) ·  $1578 + 3356 = 4934$  (F) ·  $2966 + 4160 = 7126$  (M) ·  $1350 + 1096 = 2446$  (G) ·  $2009 + 3435 = 5444$  (E) ·  $966 + 1427 = 2393$  (N) ·  $4571 + 2238 = 6809$  (H) ·  $2059 + 3409 = 5468$  (O)

### Clue 3 (Subtraction): "THE LOUD MUSIC MADE THEM COVER THEIR EARS"

$8856 - 3299 = 5557$  (T) ·  $11128 - 3941 = 7187$  (H) ·  $7856 - 771 = 7085$  (L) ·  $8626 - 832 = 7794$  (I) ·  $6686 - 3937 = 2749$  (S) ·  $4561 - 983 = 3578$  (R) ·  $5130 - 2145 = 2985$  (M) ·  $7737 - 278 = 7459$  (E) ·  $6549 - 2030 = 4519$  (D) ·  $12655 - 4086 = 8569$  (U) ·  $7541 - 4232 = 3309$  (A) ·  $3940 - 343 = 3597$  (V) ·  $11104 - 4530 = 6574$  (C) ·  $6376 - 321 = 6055$  (O)

### Clue 4 (Rounding): "FOUND A HIGH PONYTAIL BAND IN THE FOAM PIT"

Round 2,882 to the nearest hundred = 2900 (F) · Round 4,339 to the nearest hundred = 4300 (N) · Round 370 to the nearest ten = 370 (M) · Round 26 to the nearest ten = 30 (D) · Round 170 to the nearest ten = 170 (P) · Round 22 to the nearest ten = 20 (B) · Round 3,026 to the nearest thousand = 3000 (G) · Round 882 to the nearest hundred = 900 (E) · Round 227 to the nearest ten = 230 (A) · Round 1,674 to the nearest hundred = 1700 (L) · Round 3,673 to the nearest hundred = 3700 (I) · Round 2,310 to the nearest hundred = 2300 (O) · Round 479 to the nearest hundred = 500 (H) · Round 86 to the nearest ten = 90 (Y) · Round 4,757 to the nearest thousand = 5000 (U) · Round 9,285 to the nearest thousand = 9000 (T)

### Clue 5 (Division facts (1-12)): surviving statement is box 8 → Mitch

$28 \div 7 = 4$  ·  $24 \div 12 = 2$  ·  $70 \div 10 = 7$  ·  $3 \div 1 = 3$  ·  $50 \div 10 = 5$  ·  $33 \div 3 = 11$  ·  $54 \div 6 = 9$  ·  $36 \div 3 = 12$  ·  $10 \div 10 = 1$  ·  $100 \div 10 = 10$  ·  $54 \div 9 = 6$