



# The Mystery of the Missing Masterpiece

Grade 5 math · Fractions of a number, Order of operations, Multiplication, Rounding · Reading level grades 5-6

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

A rare, gold-leafed golf novel has been stolen from the club's private collection! The suspect left behind a trail of golf tees, bookmarks, and scuffed turf. Help the junior detectives solve the clues and find the culprit.

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 Rogue Reader is** \_\_\_\_\_

## Possible suspects

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

| NAME             | GOLF SHOT SIGNATURE | FAVORITE GENRE       | GLOVE HAND         | VISOR HAIR COLOR | GREATEST DISTRACTION  |
|------------------|---------------------|----------------------|--------------------|------------------|-----------------------|
| Lucy Li          | lofted bunker shot  | mystery fiction      | left handed glove  | sandy blonde     | lost golf balls       |
| Roald Dahl       | trick chip          | science fiction      | left handed glove  | sandy blonde     | lost golf balls       |
| Arnold Palmer    | power drive         | mystery fiction      | right handed glove | ink black        | noisy lawnmowers      |
| Ben Hogan        | power drive         | historical adventure | right handed glove | sandy blonde     | noisy lawnmowers      |
| Jack Nicklaus    | trick chip          | sports biography     | right handed glove | sandy blonde     | noisy lawnmowers      |
| Arthur Doyle     | lofted bunker shot  | mystery fiction      | right handed glove | rusty red        | overdue library fines |
| Jordan Spieth    | laser wedge         | science fiction      | right handed glove | sandy blonde     | noisy lawnmowers      |
| Jules Verne      | perfect putt        | mystery fiction      | left handed glove  | ink black        | lost golf balls       |
| Annika Sorenstam | power drive         | sports biography     | right handed glove | ink black        | overdue library fines |
| Virginia Woolf   | trick chip          | fantasy lore         | right handed glove | sandy blonde     | noisy lawnmowers      |
| Rory McIlroy     | perfect putt        | historical adventure | left handed glove  | ink black        | lost golf balls       |
| Nelly Korda      | lofted bunker shot  | historical adventure | right handed glove | sandy blonde     | noisy lawnmowers      |
| Lewis Carroll    | trick chip          | mystery fiction      | left handed glove  | ink black        | overdue library fines |
| Babe Zaharias    | power drive         | science fiction      | left handed glove  | sandy blonde     | lost golf balls       |
| Mark Twain       | trick chip          | science fiction      | right handed glove | sandy blonde     | lost golf balls       |
| Phil Mickelson   | trick chip          | fantasy lore         | left handed glove  | sandy blonde     | overdue library fines |
| Walter Hagen     | lofted bunker shot  | science fiction      | left handed glove  | sandy blonde     | overdue library fines |
| Edgar Poe        | laser wedge         | science fiction      | right handed glove | ink black        | overdue library fines |
| Mary Shelley     | trick chip          | mystery fiction      | right handed glove | ink black        | lost golf balls       |
| Tiger Woods      | lofted bunker shot  | science fiction      | left handed glove  | rusty red        | noisy lawnmowers      |
| Jane Austen      | lofted bunker shot  | science fiction      | left handed glove  | sandy blonde     | noisy lawnmowers      |

## Fractions of a number

The club librarian notices that a specific fraction of the golf books are missing. Solve this fraction puzzle to reveal the first clue.

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

20 16 39 20 16 13 39 17 18 2 39 15 10 2 20 25 39 5 18 17 5 10 20 5 15 9 22 2 25 39

$$\frac{1}{8} \text{ of } 160 = \boxed{\phantom{000}} \rightarrow \boxed{\text{T}}$$

$$3/6 \text{ of } 32 = \boxed{\phantom{00}} \rightarrow \boxed{\text{H}}$$

6/10 of 30 =  → **D**

$$\frac{1}{6} \text{ of } 12 = \boxed{\phantom{00}} \rightarrow \boxed{0}$$

$$2/6 \text{ of } 75 = \boxed{\phantom{00}} \rightarrow \boxed{\text{R}}$$

$$1/2 \text{ of } 26 = \boxed{\phantom{00}} \rightarrow \boxed{\text{I}}$$

$2/8$  of 68 =   $\rightarrow$  **F**

4/8 of 30 =  → **S**

5/10 of 78 =  → **E**

$$2/10 \text{ of } 45 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{Y}}$$

$$\frac{1}{3} \text{ of } 66 = \boxed{\phantom{00}} \rightarrow \boxed{\text{L}}$$

$$\frac{1}{6} \text{ of } 60 = \boxed{\phantom{00}} \rightarrow \boxed{\text{N}}$$

$1/10$  of 50 =   $\rightarrow$  **A**

Scratch space:

## CLUE 2

## Order of operations

To unlock the library digital security log we must calculate a multi step math score from a scorecard. Follow the order of operations to solve it.

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

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| T  |    |    | T  |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 49 | 41 | 45 | 49 | 41 | 60 | 45 | 46 | 75 | 30 | 68 | 40 | 40 | 45 | 75 | 6  |  |
|    |    |    |    | T  |    |    |    |    |    |    |    |    |    |    |    |  |
| 30 | 60 | 14 | 41 | 49 | 41 | 6  | 52 | 75 | 45 | 75 | 14 | 69 | 68 | 29 | 45 |  |

$13 + 4 \times 9 = \square \rightarrow \boxed{\text{T}}$

$9 \times 5 - 15 = \square \rightarrow \boxed{\text{R}}$

$12 \times 5 - 14 = \square \rightarrow \boxed{\text{F}}$

$17 + 6 \times 2 = \square \rightarrow \boxed{\text{V}}$

$24 + 9 \times 4 = \square \rightarrow \boxed{\text{I}}$

$39 + 2 \times 3 = \square \rightarrow \boxed{\text{E}}$

$8 + 8 \times 4 = \square \rightarrow \boxed{\text{P}}$

$44 + 4 \times 2 = \square \rightarrow \boxed{\text{N}}$

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

$2 + 4 \times 3 = \square \rightarrow \boxed{\text{G}}$

$5 \times 10 - 9 = \square \rightarrow \boxed{\text{H}}$

$59 + 8 \times 2 = \square \rightarrow \boxed{\text{D}}$

$57 + 4 \times 3 = \square \rightarrow \boxed{\text{L}}$

$7 \times 11 - 9 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

## Multiplication facts (1-12)

The suspect left behind several organized crates of brand new golf balls. Multiply the rows of boxes to count the total balls and find the next clue.

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

90 25 108 70 22 70 3 108 20 90 20 15 48 108 81 108 24 12 90

50 15 100 70 7 27 12 48 50 88 15 48 108 81 70

$$10 \times 9 = \boxed{\phantom{00}} \rightarrow \boxed{\text{T}}$$

$$7 \times 10 = \boxed{\phantom{00}} \rightarrow \boxed{\text{S}}$$

$$2 \times 11 = \boxed{\phantom{00}} \rightarrow \boxed{\text{U}}$$

$1 \times 7 = \boxed{\phantom{00}} \rightarrow \boxed{\text{Y}}$

$12 \times 2 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{D}}$

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

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

$$9 \times 9 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{R}}$$

$8 \times 6 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{W}}$

$3 \times 4 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{A}}$

$10 \times 5 = \boxed{\phantom{00}} \rightarrow \boxed{\text{N}}$

$10 \times 10 = \boxed{\phantom{00}} \rightarrow \boxed{\phantom{00}}$

$12 \times 9 =$    $\rightarrow$  **E**

$5 \times 4 = \square \rightarrow \boxed{\mathbf{C}}$

$3 \times 1 = \square \rightarrow \boxed{\mathbf{P}}$

$9 \times 3 = \square \rightarrow \boxed{\text{L}}$

$$3 \times 5 = \boxed{\phantom{00}} \rightarrow \boxed{0}$$

Scratch space:

## CLUE 4 Rounding

A laser rangefinder dropped on the fairway displays a yardage that we need to round to the nearest ten to pinpoint the escape route.

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

|          |     |     |     |     |      |      |     |      |     |     |      |     |      |     |    |
|----------|-----|-----|-----|-----|------|------|-----|------|-----|-----|------|-----|------|-----|----|
| <b>W</b> |     |     |     |     |      |      |     |      |     |     |      |     |      |     |    |
| 290      | 300 | 90  | 70  | 500 | 130  | 230  | 900 | 9000 | 110 | 50  | 130  | 230 | 900  | 70  | 90 |
|          |     |     |     |     |      |      |     |      |     |     |      |     |      |     |    |
| 900      | 50  | 130 | 230 | 20  | 3700 | 1300 | 70  | 130  | 230 | 300 | 4300 | 50  | 2000 | 110 |    |

Round 288 to the nearest ten  → **W**

Round 518 to the nearest hundred  → **U**

Round 52 to the nearest ten  → **A**

Round 112 to the nearest ten  → **R**

Round 234 to the nearest ten  → **D**

Round 9,122 to the nearest thousand  → **T**

Round 87 to the nearest ten  → **F**

Round 259 to the nearest hundred  → **E**

Round 3,742 to the nearest hundred  → **B**

Round 891 to the nearest hundred  → **S**

Round 1,649 to the nearest thousand  → **I**

Round 19 to the nearest ten  → **Y**

Round 70 to the nearest ten  → **O**

Round 4,303 to the nearest hundred  → **H**

Round 130 to the nearest ten  → **N**

Round 1,342 to the nearest hundred  → **L**

Scratch space:

**CLUE 5****Fractions of a number - the last clue**

Our junior detective team needs to divide a stack of bookmark clues. Figure out the fraction of bookmarks assigned to each investigator to crack the final clue.

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:**

$1/3 \text{ of } 12 = \boxed{\phantom{00}}$

$1/10 \text{ of } 80 = \boxed{\phantom{00}}$

$5/10 \text{ of } 22 = \boxed{\phantom{00}}$

$2/3 \text{ of } 15 = \boxed{\phantom{00}}$

$3/6 \text{ of } 4 = \boxed{\phantom{00}}$

$3/5 \text{ of } 5 = \boxed{\phantom{00}}$

$2/4 \text{ of } 14 = \boxed{\phantom{00}}$

$5/10 \text{ of } 10 = \boxed{\phantom{00}}$

$3/4 \text{ of } 12 = \boxed{\phantom{00}}$

$1/2 \text{ of } 2 = \boxed{\phantom{00}}$

$4/6 \text{ of } 9 = \boxed{\phantom{00}}$

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

1. The villain chipped a golf ball into the keyhole, then fled in a golf cart.
2. The villain swiped the rare book from the shelf, then dashed out the club entrance.
3. The villain distracted the librarian with a trick shot, then hid behind the book cart.
4. The villain chipped a golf ball into the keyhole, then dashed out the club entrance.
5. The villain swiped the rare book from the shelf, then fled in a golf cart.
6. The villain swiped the rare book from the shelf, then hid behind the book cart.
7. The villain snuck through the back library window, then dashed out the club entrance.
8. The villain snuck through the back library window, then bolted into the rough grass.
9. The villain snuck through the back library window, then hid behind the book cart.
10. The villain smashed a golf ball through the glass, then bolted into the rough grass.
11. The villain distracted the librarian with a trick shot, then bolted into the rough grass.
12. The villain smashed a golf ball through the glass, then hid behind the book cart.

# Answer Key

## The Mystery of the Missing Masterpiece

### Culprit: Jordan Spieth

laser wedge · science fiction · right handed glove · sandy blonde · noisy lawnmowers

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

#### Clue 1 (Fractions of a number): "THE THIEF DOES NOT READ FANTASY LORE"

$\frac{1}{8}$  of 160 = 20 (T) ·  $\frac{3}{6}$  of 32 = 16 (H) ·  $\frac{6}{10}$  of 30 = 18 (D) ·  $\frac{1}{6}$  of 12 = 2 (O) ·  $\frac{2}{6}$  of 75 = 25 (R) ·  $\frac{1}{2}$  of 26 = 13 (I) ·  $\frac{2}{8}$  of 68 = 17 (F) ·  $\frac{4}{8}$  of 30 = 15 (S) ·  $\frac{5}{10}$  of 78 = 39 (E) ·  $\frac{2}{10}$  of 45 = 9 (Y) ·  $\frac{1}{3}$  of 66 = 22 (L) ·  $\frac{1}{6}$  of 60 = 10 (N) ·  $\frac{1}{10}$  of 50 = 5 (A)

#### Clue 2 (Order of operations): "THE THIEF DROPPED A RIGHT HANDED GLOVE"

$13 + 4 \times 9 = 49$  (T) ·  $9 \times 5 - 15 = 30$  (R) ·  $12 \times 5 - 14 = 46$  (F) ·  $17 + 6 \times 2 = 29$  (V) ·  $24 + 9 \times 4 = 60$  (I) ·  $39 + 2 \times 3 = 45$  (E) ·  $8 + 8 \times 4 = 40$  (P) ·  $44 + 4 \times 2 = 52$  (N) ·  $2 + 2 \times 2 = 6$  (A) ·  $2 + 4 \times 3 = 14$  (G) ·  $5 \times 10 - 9 = 41$  (H) ·  $59 + 8 \times 2 = 75$  (D) ·  $57 + 4 \times 3 = 69$  (L) ·  $7 \times 11 - 9 = 68$  (O)

#### Clue 3 (Multiplication facts (1-12)): "THE SUSPECT COWERED AT NOISY LAWNMOWERS"

$10 \times 9 = 90$  (T) ·  $7 \times 10 = 70$  (S) ·  $2 \times 11 = 22$  (U) ·  $1 \times 7 = 7$  (Y) ·  $12 \times 2 = 24$  (D) ·  $5 \times 5 = 25$  (H) ·  $8 \times 11 = 88$  (M) ·  $9 \times 9 = 81$  (R) ·  $8 \times 6 = 48$  (W) ·  $3 \times 4 = 12$  (A) ·  $10 \times 5 = 50$  (N) ·  $10 \times 10 = 100$  (I) ·  $12 \times 9 = 108$  (E) ·  $5 \times 4 = 20$  (C) ·  $3 \times 1 = 3$  (P) ·  $9 \times 3 = 27$  (L) ·  $3 \times 5 = 15$  (O)

#### Clue 4 (Rounding): "WE FOUND STRANDS OF SANDY BLONDE HAIR"

Round 288 to the nearest ten = 290 (W) · Round 518 to the nearest hundred = 500 (U) · Round 52 to the nearest ten = 50 (A) · Round 112 to the nearest ten = 110 (R) · Round 234 to the nearest ten = 230 (D) · Round 9,122 to the nearest thousand = 9000 (T) · Round 87 to the nearest ten = 90 (F) · Round 259 to the nearest hundred = 300 (E) · Round 3,742 to the nearest hundred = 3700 (B) · Round 891 to the nearest hundred = 900 (S) · Round 1,649 to the nearest thousand = 2000 (I) · Round 19 to the nearest ten = 20 (Y) · Round 70 to the nearest ten = 70 (O) · Round 4,303 to the nearest hundred = 4300 (H) · Round 130 to the nearest ten = 130 (N) · Round 1,342 to the nearest hundred = 1300 (L)

#### Clue 5 (Fractions of a number): surviving statement is box 12 → Jordan Spieth

$\frac{1}{3}$  of 12 = 4 ·  $\frac{1}{10}$  of 80 = 8 ·  $\frac{5}{10}$  of 22 = 11 ·  $\frac{2}{3}$  of 15 = 10 ·  $\frac{3}{6}$  of 4 = 2 ·  $\frac{3}{5}$  of 5 = 3 ·  $\frac{2}{4}$  of 14 = 7 ·  $\frac{5}{10}$  of 10 = 5 ·  $\frac{3}{4}$  of 12 = 9 ·  $\frac{1}{2}$  of 2 = 1 ·  $\frac{4}{6}$  of 9 = 6