



# The Emperor's Lost Laurel

Grade 5 math · Subtraction, Addition, Fractions of a number, Order of operations, Division · Reading level grades 5-6

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

A rogue officer has snatched Emperor Napoleon's golden laurel crown right before his grand coronation! The guards are in a frenzy, and France needs its top math detective. Examine the clues, solve the equations, and unmask the culprit before they escape across the border!

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 officer is** \_\_\_\_\_

## Possible suspects

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

| NAME                 | FAVORITE TACTIC   | SIGNATURE GEAR     | HANDWRITING  | HAIR STYLE     | SECRET WEAKNESS |
|----------------------|-------------------|--------------------|--------------|----------------|-----------------|
| General Augereau     | Artillery Barrage | Brass Compass      | Right-handed | Dark Curls     | Peppermint Tea  |
| General Mortier      | Cavalry Charge    | Silver Pocketwatch | Left-handed  | Crimson Ribbon | Peppermint Tea  |
| General Caulaincourt | Night March       | Golden Monocle     | Right-handed | Dark Curls     | Sweet Crepes    |
| General Grouchy      | Artillery Barrage | Golden Monocle     | Left-handed  | Powdered Wig   | Peppermint Tea  |
| General Oudinot      | Decoy Retreat     | Velvet Cloak       | Left-handed  | Dark Curls     | Strong Coffee   |
| General Lefebvre     | Flanking Maneuver | Silver Pocketwatch | Left-handed  | Powdered Wig   | Sweet Crepes    |
| Marshal Davout       | Artillery Barrage | Silver Pocketwatch | Left-handed  | Dark Curls     | Peppermint Tea  |
| General Massena      | Flanking Maneuver | Golden Monocle     | Right-handed | Dark Curls     | Sweet Crepes    |
| Marshal Murat        | Night March       | Brass Compass      | Right-handed | Dark Curls     | Sweet Crepes    |
| General Suchet       | Cavalry Charge    | Velvet Cloak       | Left-handed  | Powdered Wig   | Sweet Crepes    |
| General Victor       | Decoy Retreat     | Golden Monocle     | Left-handed  | Crimson Ribbon | Peppermint Tea  |
| General Moncey       | Flanking Maneuver | Velvet Cloak       | Left-handed  | Dark Curls     | Sweet Crepes    |
| Marshal Lannes       | Flanking Maneuver | Silver Pocketwatch | Left-handed  | Powdered Wig   | Strong Coffee   |
| General Macdonald    | Night March       | Velvet Cloak       | Left-handed  | Dark Curls     | Peppermint Tea  |
| General Duroc        | Cavalry Charge    | Brass Compass      | Left-handed  | Crimson Ribbon | Sweet Crepes    |
| General Jourdan      | Cavalry Charge    | Silver Pocketwatch | Left-handed  | Dark Curls     | Peppermint Tea  |
| General Marmont      | Flanking Maneuver | Tricorner Hat      | Left-handed  | Dark Curls     | Peppermint Tea  |
| Marshal Berthier     | Decoy Retreat     | Brass Compass      | Left-handed  | Dark Curls     | Peppermint Tea  |
| Marshal Soult        | Cavalry Charge    | Tricorner Hat      | Right-handed | Dark Curls     | Peppermint Tea  |
| General Bessieres    | Artillery Barrage | Silver Pocketwatch | Right-handed | Crimson Ribbon | Sweet Crepes    |
| General Brune        | Flanking Maneuver | Velvet Cloak       | Left-handed  | Crimson Ribbon | Sweet Crepes    |

**CLUE 1**
**Subtraction**

We count the Emperor's decorative gold bees. Subtracting the broken bees from the total reveals a clue about the thief's gear.

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

|                              |                              |                             |                              |                             |                             |                             |                             |                             |                             |                             |                             |                              |                             |                              |                             |                             |                             |                             |
|------------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <div>T</div> <div>7616</div> | <div></div> <div>2773</div>  | <div></div> <div>5045</div> | <div>T</div> <div>7616</div> | <div></div> <div>2773</div> | <div></div> <div>6905</div> | <div></div> <div>5045</div> | <div></div> <div>8759</div> | <div></div> <div>8913</div> | <div></div> <div>2085</div> | <div></div> <div>5045</div> | <div></div> <div>1708</div> | <div></div> <div>8333</div>  | <div></div> <div>2085</div> | <div>T</div> <div>7616</div> | <div></div> <div>8265</div> | <div></div> <div>5045</div> | <div></div> <div>7011</div> | <div></div> <div>7609</div> |
| <div></div> <div>7011</div>  | <div>T</div> <div>7616</div> | <div></div> <div>7609</div> | <div></div> <div>6905</div>  | <div></div> <div>3540</div> | <div></div> <div>2085</div> | <div></div> <div>7609</div> | <div></div> <div>8333</div> | <div></div> <div>5045</div> | <div></div> <div>7609</div> | <div></div> <div>2773</div> | <div></div> <div>7011</div> | <div>T</div> <div>7616</div> |                             |                              |                             |                             |                             |                             |

$7663 - 47 = \square \rightarrow \boxed{\text{T}}$

$10280 - 2671 = \square \rightarrow \boxed{\text{R}}$

$6620 - 4535 = \square \rightarrow \boxed{\text{O}}$

$8926 - 3881 = \square \rightarrow \boxed{\text{E}}$

$11013 - 2680 = \square \rightarrow \boxed{\text{N}}$

$5609 - 2069 = \square \rightarrow \boxed{\text{C}}$

$2240 - 532 = \square \rightarrow \boxed{\text{S}}$

$12036 - 3277 = \square \rightarrow \boxed{\text{F}}$

$12829 - 4564 = \square \rightarrow \boxed{\text{W}}$

$11451 - 2538 = \square \rightarrow \boxed{\text{D}}$

$7059 - 4286 = \square \rightarrow \boxed{\text{H}}$

$9711 - 2700 = \square \rightarrow \boxed{\text{A}}$

$9088 - 2183 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

## CLUE 2 Addition

Our scouts count the horses arriving at the northern gate. Adding the two main herds gives us the clue about their handwriting.

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>T</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div>T</div> |
| 3426         | 8005        | 7575        | 3507        | 8521        | 3426         | 8587        | 7575        | 2417        | 2417        | 2417        | 5836        | 3507        | 2081        | 7575        | 4937        | 3426         |

  

|             |             |             |             |             |             |             |             |              |             |             |             |      |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|------|
| <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> |      |
| 8005        | 5836        | 8587        | 6046        | 7575        | 6046        | 3507        | 8256        | 8521         | 3426        | 8521        | 8587        | 3475 |

$1712 + 1714 = \boxed{\phantom{000}} \rightarrow \boxed{\text{T}}$

$1252 + 1165 = \boxed{\phantom{000}} \rightarrow \boxed{\text{S}}$

$4071 + 1975 = \boxed{\phantom{000}} \rightarrow \boxed{\text{D}}$

$3602 + 4654 = \boxed{\phantom{000}} \rightarrow \boxed{\text{R}}$

$5257 + 3264 = \boxed{\phantom{000}} \rightarrow \boxed{\text{I}}$

$3666 + 4339 = \boxed{\phantom{000}} \rightarrow \boxed{\text{H}}$

$3265 + 5322 = \boxed{\phantom{000}} \rightarrow \boxed{\text{N}}$

$1101 + 980 = \boxed{\phantom{000}} \rightarrow \boxed{\text{L}}$

$4748 + 2827 = \boxed{\phantom{000}} \rightarrow \boxed{\text{E}}$

$1704 + 1771 = \boxed{\phantom{000}} \rightarrow \boxed{\text{G}}$

$2441 + 3395 = \boxed{\phantom{000}} \rightarrow \boxed{\text{A}}$

$1847 + 3090 = \boxed{\phantom{000}} \rightarrow \boxed{\text{F}}$

$1689 + 1818 = \boxed{\phantom{000}} \rightarrow \boxed{\text{W}}$

Scratch space:

**CLUE 3**

## Fractions of a number

A messenger brings a map of the royal bakery. Finding a fraction of the total French crepes reveals the thief's favorite treat.

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

|    |    |   |    |    |   |   |   |    |   |   |    |   |   |    |  |  |  |
|----|----|---|----|----|---|---|---|----|---|---|----|---|---|----|--|--|--|
| T  |    |   |    |    |   |   |   |    |   |   |    |   |   |    |  |  |  |
| 33 | 39 | 3 | 38 | 34 | 9 | 3 | 3 | 29 | 3 | 4 | 20 | 6 | 2 | 36 |  |  |  |

|    |   |    |    |   |   |    |   |   |    |    |   |    |
|----|---|----|----|---|---|----|---|---|----|----|---|----|
|    |   |    |    |   |   |    |   |   | T  | T  |   |    |
| 40 | 3 | 40 | 40 | 3 | 6 | 36 | 8 | 9 | 33 | 33 | 3 | 12 |

$3/5 \text{ of } 55 = \square \rightarrow \boxed{\text{T}}$

$2/8 \text{ of } 160 = \square \rightarrow \boxed{\text{P}}$

$3/10 \text{ of } 130 = \square \rightarrow \boxed{\text{H}}$

$3/6 \text{ of } 58 = \square \rightarrow \boxed{\text{Z}}$

$1/4 \text{ of } 36 = \square \rightarrow \boxed{\text{N}}$

$1/3 \text{ of } 60 = \square \rightarrow \boxed{\text{F}}$

$2/3 \text{ of } 6 = \square \rightarrow \boxed{\text{D}}$

$2/3 \text{ of } 9 = \square \rightarrow \boxed{\text{R}}$

$4/10 \text{ of } 5 = \square \rightarrow \boxed{\text{O}}$

$1/4 \text{ of } 32 = \square \rightarrow \boxed{\text{I}}$

$2/4 \text{ of } 68 = \square \rightarrow \boxed{\text{S}}$

$1/10 \text{ of } 30 = \square \rightarrow \boxed{\text{E}}$

$2/6 \text{ of } 36 = \square \rightarrow \boxed{\text{A}}$

$2/6 \text{ of } 114 = \square \rightarrow \boxed{\text{Y}}$

$3/4 \text{ of } 48 = \square \rightarrow \boxed{\text{M}}$

Scratch space:

## CLUE 4

## Order of operations

To crack the lock on the general's desk, we must solve a complex equation in the exact order of steps to find a hair sample.

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

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|
| S  |    |    |    |    |    | S  |    |    |    |    |    |    |    |    |    |    |   |  |  |
| 19 | 45 | 40 | 66 | 52 | 79 | 19 | 15 | 71 | 79 | 66 | 40 | 12 | 56 | 18 | 40 | 47 | 8 |  |  |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |
| 63 | 66 | 64 | 40 | 7  | 74 | 40 | 74 | 71 | 15 | 18 | 52 | 79 |    |    |    |    |   |  |  |

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

$51 + 2 \times 6 = \square \rightarrow \boxed{\text{H}}$

$4 + 8 \times 6 = \square \rightarrow \boxed{\text{N}}$

$18 + 9 \times 3 = \square \rightarrow \boxed{\text{T}}$

$46 + 2 \times 5 = \square \rightarrow \boxed{\text{C}}$

$6 \times 12 - 1 = \square \rightarrow \boxed{\text{F}}$

$1 + 3 \times 2 = \square \rightarrow \boxed{\text{W}}$

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

$37 + 3 \times 9 = \square \rightarrow \boxed{\text{I}}$

$9 \times 6 - 7 = \square \rightarrow \boxed{\text{L}}$

$9 \times 10 - 24 = \square \rightarrow \boxed{\text{A}}$

$11 \times 6 - 26 = \square \rightarrow \boxed{\text{R}}$

$2 \times 12 - 16 = \square \rightarrow \boxed{\text{Y}}$

$12 \times 8 - 22 = \square \rightarrow \boxed{\text{E}}$

$12 \times 7 - 5 = \square \rightarrow \boxed{\text{D}}$

$6 + 3 \times 4 = \square \rightarrow \boxed{\text{U}}$

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

Scratch space:

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

The cadet divides the heavy brass buttons equally among the coats to find the thief's escape route.

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:**

$108 \div 12 = \boxed{\phantom{00}}$

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

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

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

$40 \div 5 = \boxed{\phantom{00}}$

$132 \div 12 = \boxed{\phantom{00}}$

$28 \div 4 = \boxed{\phantom{00}}$

$8 \div 2 = \boxed{\phantom{00}}$

$30 \div 3 = \boxed{\phantom{00}}$

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

$35 \div 7 = \boxed{\phantom{00}}$

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

1. The villain commands a silent night march, then winds a silver pocketwatch.
2. The villain orders a grand cavalry charge, then winds a silver pocketwatch.
3. The villain orders a grand cavalry charge, then adjusts a tricorn hat.
4. The villain orders a grand cavalry charge, then checks a brass compass.
5. The villain directs a clever flanking maneuver, then checks a brass compass.
6. The villain sets up a loud artillery barrage, then winds a silver pocketwatch.
7. The villain orders a grand cavalry charge, then swishes a velvet cloak.
8. The villain commands a silent night march, then checks a brass compass.
9. The villain commands a silent night march, then swishes a velvet cloak.
10. The villain leads a sneaky decoy retreat, then winds a silver pocketwatch.
11. The villain sets up a loud artillery barrage, then adjusts a tricorn hat.
12. The villain leads a sneaky decoy retreat, then checks a brass compass.

# Answer Key

## The Emperor's Lost Laurel

### Culprit: Marshal Berthier

Decoy Retreat · Brass Compass · Left-handed · Dark Curls · Peppermint Tea

Trail: Start 21 → Clue 1 19 → Clue 2 14 → Clue 3 7 → Clue 4 4 → Clue 5 1

#### Clue 1 (Subtraction): "THE THIEF DOES NOT WEAR A TRICORNER HAT"

$7663 - 47 = 7616$  (T) ·  $10280 - 2671 = 7609$  (R) ·  $6620 - 4535 = 2085$  (O) ·  $8926 - 3881 = 5045$  (E) ·  $11013 - 2680 = 8333$  (N) ·  $5609 - 2069 = 3540$  (C) ·  $2240 - 532 = 1708$  (S) ·  $12036 - 3277 = 8759$  (F) ·  $12829 - 4564 = 8265$  (W) ·  $11451 - 2538 = 8913$  (D) ·  $7059 - 4286 = 2773$  (H) ·  $9711 - 2700 = 7011$  (A) ·  $9088 - 2183 = 6905$  (I)

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

$1712 + 1714 = 3426$  (T) ·  $1252 + 1165 = 2417$  (S) ·  $4071 + 1975 = 6046$  (D) ·  $3602 + 4654 = 8256$  (R) ·  $5257 + 3264 = 8521$  (I) ·  $3666 + 4339 = 8005$  (H) ·  $3265 + 5322 = 8587$  (N) ·  $1101 + 980 = 2081$  (L) ·  $4748 + 2827 = 7575$  (E) ·  $1704 + 1771 = 3475$  (G) ·  $2441 + 3395 = 5836$  (A) ·  $1847 + 3090 = 4937$  (F) ·  $1689 + 1818 = 3507$  (W)

#### Clue 3 (Fractions of a number): "THEY SNEEZED FROM PEPPERMINT TEA"

$\frac{3}{5}$  of 55 = 33 (T) ·  $\frac{2}{8}$  of 160 = 40 (P) ·  $\frac{3}{10}$  of 130 = 39 (H) ·  $\frac{3}{6}$  of 58 = 29 (Z) ·  $\frac{1}{4}$  of 36 = 9 (N) ·  $\frac{1}{3}$  of 60 = 20 (F) ·  $\frac{2}{3}$  of 6 = 4 (D) ·  $\frac{2}{3}$  of 9 = 6 (R) ·  $\frac{4}{10}$  of 5 = 2 (O) ·  $\frac{1}{4}$  of 32 = 8 (I) ·  $\frac{2}{4}$  of 68 = 34 (S) ·  $\frac{1}{10}$  of 30 = 3 (E) ·  $\frac{2}{6}$  of 36 = 12 (A) ·  $\frac{2}{6}$  of 114 = 38 (Y) ·  $\frac{3}{4}$  of 48 = 36 (M)

#### Clue 4 (Order of operations): "STRANDS OF DARK CURLY HAIR WERE FOUND"

$3 + 4 \times 4 = 19$  (S) ·  $51 + 2 \times 6 = 63$  (H) ·  $4 + 8 \times 6 = 52$  (N) ·  $18 + 9 \times 3 = 45$  (T) ·  $46 + 2 \times 5 = 56$  (C) ·  $6 \times 12 - 1 = 71$  (F) ·  $1 + 3 \times 2 = 7$  (W) ·  $4 + 2 \times 4 = 12$  (K) ·  $37 + 3 \times 9 = 64$  (I) ·  $9 \times 6 - 7 = 47$  (L) ·  $9 \times 10 - 24 = 66$  (A) ·  $11 \times 6 - 26 = 40$  (R) ·  $2 \times 12 - 16 = 8$  (Y) ·  $12 \times 8 - 22 = 74$  (E) ·  $12 \times 7 - 5 = 79$  (D) ·  $6 + 3 \times 4 = 18$  (U) ·  $5 + 5 \times 2 = 15$  (O)

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

$108 \div 12 = 9$  ·  $8 \div 4 = 2$  ·  $24 \div 4 = 6$  ·  $3 \div 1 = 3$  ·  $40 \div 5 = 8$  ·  $132 \div 12 = 11$  ·  $28 \div 4 = 7$  ·  $8 \div 2 = 4$  ·  $30 \div 3 = 10$  ·  $12 \div 12 = 1$  ·  $35 \div 7 = 5$