



# The Mystery of the Starlight Bandit

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

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

The Starlight Cinema is in trouble! Someone is sneaking into the theaters, mixing up the movie reels, and eating all the snacks. The Theater Manager needs your help to find the Popcorn Bandit before the big evening show starts!

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 Popcorn Bandit is** \_\_\_\_\_

# Possible suspects

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

| NAME            | FAVORITE MOVIE GENRE | STOLEN SNACK     | SUSPECT ROLE | HEADWEAR     | WEAKNESS          |
|-----------------|----------------------|------------------|--------------|--------------|-------------------|
| Lucy Lobby      | Comedy               | Gummy Bears      | Actress      | Red Cap      | Loud Sneeze       |
| Ella Editor     | Action               | Sour Candy       | Actress      | Golden Crown | Sticky Floor      |
| Penny Popcorn   | Cartoon              | Soda Pop         | Actress      | Golden Crown | Bright Flashlight |
| Ruby Reel       | Sci-Fi               | Buttered Popcorn | Actress      | Golden Crown | Sticky Floor      |
| Finn Film       | Comedy               | Buttered Popcorn | Actor        | Red Cap      | Loud Sneeze       |
| Benny Butter    | Sci-Fi               | Buttered Popcorn | Actress      | Red Cap      | Bright Flashlight |
| Bella Boxoffice | Comedy               | Sour Candy       | Actor        | Golden Crown | Bright Flashlight |
| Leo Lights      | Sci-Fi               | Buttered Popcorn | Actress      | Red Cap      | Sticky Floor      |
| Zoe Zoom        | Cartoon              | Buttered Popcorn | Actress      | Golden Crown | Loud Sneeze       |
| Molly Music     | Sci-Fi               | Nacho Cheese     | Actress      | Golden Crown | Sticky Floor      |
| Mia Movie       | Comedy               | Sour Candy       | Actress      | Golden Crown | Bright Flashlight |
| Toby Ticket     | Cartoon              | Gummy Bears      | Actress      | Golden Crown | Bright Flashlight |
| Clara Candy     | Mystery              | Gummy Bears      | Actor        | Red Cap      | Loud Sneeze       |
| Danny Drama     | Comedy               | Nacho Cheese     | Actor        | Golden Crown | Bright Flashlight |
| Oliver Oscar    | Mystery              | Nacho Cheese     | Actress      | Red Cap      | Loud Sneeze       |
| Peter Poster    | Mystery              | Soda Pop         | Actress      | Golden Crown | Bright Flashlight |
| Sammy Screen    | Comedy               | Gummy Bears      | Actress      | Velvet Beret | Sticky Floor      |
| Noah Nacho      | Mystery              | Sour Candy       | Actress      | Red Cap      | Bright Flashlight |
| Grace Glamour   | Cartoon              | Nacho Cheese     | Actress      | Golden Crown | Bright Flashlight |
| Charlie Camera  | Comedy               | Soda Pop         | Actor        | Velvet Beret | Loud Sneeze       |
| Max Matinee     | Action               | Soda Pop         | Actor        | Golden Crown | Bright Flashlight |

### CLUE 1

We check the popcorn machine digital counter. It only shows rounded numbers, but it helps us rule out one snack!

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

2000 3000 4000 9000 20 800 400 80 2000 400 500 4000 70 800 500 2000 4000 20 2000

600 6000 50 50 300 9000 4000 20 200 70

Round 2,492 to the nearest thousand   $\rightarrow$  **T**

Round 644 to the nearest hundred   $\rightarrow$  **G**

Round 8,667 to the nearest thousand  → **B**

Round 21 to the nearest ten   $\rightarrow$  **A**

Round 6,430 to the nearest thousand  → **U**

Round 4,252 to the nearest thousand  → **E**

Round 797 to the nearest hundred   $\rightarrow$  **N**

Round 2,873 to the nearest thousand  → **H**

Round 52 to the nearest ten   $\rightarrow$  **M**

Round 370 to the nearest hundred   $\rightarrow$  **D**

Round 198 to the nearest hundred   $\rightarrow$  **R**

Round 79 to the nearest ten   $\rightarrow$

Round 512 to the nearest hundred   $\rightarrow$

Round 74 to the nearest ten   $\rightarrow$  **S**

Round 307 to the nearest hundred   $\rightarrow$  **Y**

Scratch space:

## CLUE 2 Addition

We count the spilled movie tickets on the lobby floor. Adding them all up tells us if the villain is an actor or actress.

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| T   |     |     |     |     | T   |     |     |     |     |     |     |     | T   |     |
| 811 | 435 | 986 | 861 | 866 | 811 | 235 | 986 | 925 | 925 | 423 | 986 | 898 | 811 | 861 |

  

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     |     | T   | T   |     |     |     |     |     |     |     |     |     |     |
| 676 | 423 | 649 | 811 | 811 | 986 | 235 | 297 | 435 | 861 | 649 | 235 | 644 | 649 | 877 |

|                                            |                                            |                                            |
|--------------------------------------------|--------------------------------------------|--------------------------------------------|
| $426 + 385 = \square \rightarrow$ <b>T</b> | $388 + 473 = \square \rightarrow$ <b>A</b> | $220 + 215 = \square \rightarrow$ <b>H</b> |
| $286 + 137 = \square \rightarrow$ <b>L</b> | $275 + 602 = \square \rightarrow$ <b>N</b> | $542 + 444 = \square \rightarrow$ <b>E</b> |
| $491 + 375 = \square \rightarrow$ <b>C</b> | $381 + 268 = \square \rightarrow$ <b>I</b> | $371 + 305 = \square \rightarrow$ <b>G</b> |
| $479 + 446 = \square \rightarrow$ <b>S</b> | $223 + 421 = \square \rightarrow$ <b>P</b> | $400 + 498 = \square \rightarrow$ <b>F</b> |
| $131 + 104 = \square \rightarrow$ <b>R</b> | $156 + 141 = \square \rightarrow$ <b>Y</b> |                                            |

Scratch space:

### CLUE 3 Subtraction

Some soda cups are missing from the snack bar. Subtracting the left-over cups from the starting box reveals a clue about their weakness.

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| A   |     |     |     |     |     |     |     |     | A   |     |     |     |     |     |     |     |
| 579 | 846 | 149 | 309 | 308 | 195 | 702 | 610 | 874 | 579 | 796 | 195 | 874 | 309 | 308 | 195 | 702 |

  

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     | A   |     |     |     |     |     |     |     | A   |     | A   |     |
| 796 | 220 | 579 | 149 | 336 | 796 | 702 | 195 | 336 | 786 | 579 | 821 | 579 | 843 |

|                                      |                                     |                                      |
|--------------------------------------|-------------------------------------|--------------------------------------|
| $742 - 163 = \square \rightarrow$ A  | $728 - 392 = \square \rightarrow$ E | $831 - 45 = \square \rightarrow$ M   |
| $1131 - 335 = \square \rightarrow$ S | $269 - 49 = \square \rightarrow$ C  | $401 - 92 = \square \rightarrow$ I   |
| $926 - 224 = \square \rightarrow$ T  | $473 - 165 = \square \rightarrow$ G | $296 - 101 = \square \rightarrow$ H  |
| $693 - 83 = \square \rightarrow$ F   | $416 - 267 = \square \rightarrow$ R | $1238 - 392 = \square \rightarrow$ B |
| $1124 - 250 = \square \rightarrow$ L | $888 - 45 = \square \rightarrow$ Y  | $880 - 59 = \square \rightarrow$ W   |

Scratch space:

**CLUE 4**
**Multiplication facts (1-12)**

We look at the rows of theater seats. Multiplying the rows by the seats in each row helps us find a clue about what they wear on their head.

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

|    |    |     |     |    |    |    |     |    |   |    |    |   |    |   |    |    |    |     |   |
|----|----|-----|-----|----|----|----|-----|----|---|----|----|---|----|---|----|----|----|-----|---|
| T  |    |     |     |    |    |    |     |    |   |    |    |   |    |   |    |    |    |     |   |
| 66 | 16 | 110 | 144 | 36 | 33 | 88 | 110 | 21 | 3 | 56 | 36 | 2 | 21 | 4 | 16 | 22 | 21 | 110 | 4 |
|    |    |     |     |    |    |    |     |    |   |    |    |   |    |   |    |    |    |     |   |
| 22 | 21 | 88  | 90  | 56 | 42 |    |     |    |   |    |    |   |    |   |    |    |    |     |   |

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

$7 \times 8 = \square \rightarrow \boxed{\text{R}}$

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

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

$6 \times 7 = \square \rightarrow \boxed{\text{K}}$

$11 \times 2 = \square \rightarrow \boxed{\text{I}}$

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

$10 \times 11 = \square \rightarrow \boxed{\text{E}}$

$8 \times 11 = \square \rightarrow \boxed{\text{D}}$

$12 \times 12 = \square \rightarrow \boxed{\text{G}}$

$8 \times 2 = \square \rightarrow \boxed{\text{H}}$

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

$3 \times 1 = \square \rightarrow \boxed{\text{C}}$

$7 \times 3 = \square \rightarrow \boxed{\text{N}}$

$2 \times 2 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

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

We share a bag of giant pretzels evenly among the detectives. Dividing the pretzels gives us the final clue we need.

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:**

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

$7 \div 1 = \boxed{\phantom{00}}$

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

$36 \div 4 = \boxed{\phantom{00}}$

$36 \div 9 = \boxed{\phantom{00}}$

$22 \div 2 = \boxed{\phantom{00}}$

$4 \div 2 = \boxed{\phantom{00}}$

$72 \div 12 = \boxed{\phantom{00}}$

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

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

$108 \div 9 = \boxed{\phantom{00}}$

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

1. The villain tangles the cartoon reel, then steals the bag of gummy bears.
2. The villain swaps the sci-fi movie reel, then gobbles up the buttered popcorn.
3. The villain tangles the cartoon reel, then spills the hot nacho cheese.
4. The villain swaps the sci-fi movie reel, then drinks the fizzy soda pop.
5. The villain messes up the comedy film, then munchies on the sour candy.
6. The villain swaps the sci-fi movie reel, then munchies on the sour candy.
7. The villain hides the mystery movie, then drinks the fizzy soda pop.
8. The villain tangles the cartoon reel, then drinks the fizzy soda pop.
9. The villain scrambles the action movie, then steals the bag of gummy bears.
10. The villain hides the mystery movie, then steals the bag of gummy bears.
11. The villain hides the mystery movie, then munchies on the sour candy.
12. The villain messes up the comedy film, then drinks the fizzy soda pop.

# Answer Key

## The Mystery of the Starlight Bandit

### Culprit: Penny Popcorn

Cartoon · Soda Pop · Actress · Golden Crown · Bright Flashlight

Trail: Start 21 → Clue 1 17 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

#### Clue 1 (Rounding): "THE BANDIT DOES NOT EAT GUMMY BEARS"

Round 2,492 to the nearest thousand = 2000 (T) · Round 644 to the nearest hundred = 600 (G) · Round 8,667 to the nearest thousand = 9000 (B) · Round 21 to the nearest ten = 20 (A) · Round 6,430 to the nearest thousand = 6000 (U) · Round 4,252 to the nearest thousand = 4000 (E) · Round 797 to the nearest hundred = 800 (N) · Round 2,873 to the nearest thousand = 3000 (H) · Round 52 to the nearest ten = 50 (M) · Round 370 to the nearest hundred = 400 (D) · Round 198 to the nearest hundred = 200 (R) · Round 79 to the nearest ten = 80 (I) · Round 512 to the nearest hundred = 500 (O) · Round 74 to the nearest ten = 70 (S) · Round 307 to the nearest hundred = 300 (Y)

#### Clue 2 (Addition): "THE ACTRESS LEFT A GLITTERY HAIRPIN"

$426 + 385 = 811$  (T) ·  $388 + 473 = 861$  (A) ·  $220 + 215 = 435$  (H) ·  $286 + 137 = 423$  (L) ·  $275 + 602 = 877$  (N) ·  $542 + 444 = 986$  (E) ·  $491 + 375 = 866$  (C) ·  $381 + 268 = 649$  (I) ·  $371 + 305 = 676$  (G) ·  $479 + 446 = 925$  (S) ·  $223 + 421 = 644$  (P) ·  $400 + 498 = 898$  (F) ·  $131 + 104 = 235$  (R) ·  $156 + 141 = 297$  (Y)

#### Clue 3 (Subtraction): "A BRIGHT FLASHLIGHT SCARES THEM AWAY"

$742 - 163 = 579$  (A) ·  $728 - 392 = 336$  (E) ·  $831 - 45 = 786$  (M) ·  $1131 - 335 = 796$  (S) ·  $269 - 49 = 220$  (C) ·  $401 - 92 = 309$  (I) ·  $926 - 224 = 702$  (T) ·  $473 - 165 = 308$  (G) ·  $296 - 101 = 195$  (H) ·  $693 - 83 = 610$  (F) ·  $416 - 267 = 149$  (R) ·  $1238 - 392 = 846$  (B) ·  $1124 - 250 = 874$  (L) ·  $888 - 45 = 843$  (Y) ·  $880 - 59 = 821$  (W)

#### Clue 4 (Multiplication facts (1-12)): "THE GOLDEN CROWN SHINES IN DARK"

$11 \times 6 = 66$  (T) ·  $7 \times 8 = 56$  (R) ·  $6 \times 6 = 36$  (O) ·  $3 \times 11 = 33$  (L) ·  $6 \times 7 = 42$  (K) ·  $11 \times 2 = 22$  (I) ·  $10 \times 9 = 90$  (A) ·  $10 \times 11 = 110$  (E) ·  $8 \times 11 = 88$  (D) ·  $12 \times 12 = 144$  (G) ·  $8 \times 2 = 16$  (H) ·  $2 \times 1 = 2$  (W) ·  $3 \times 1 = 3$  (C) ·  $7 \times 3 = 21$  (N) ·  $2 \times 2 = 4$  (S)

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

$30 \div 10 = 3$  ·  $7 \div 1 = 7$  ·  $40 \div 8 = 5$  ·  $36 \div 4 = 9$  ·  $36 \div 9 = 4$  ·  $22 \div 2 = 11$  ·  $4 \div 2 = 2$  ·  $72 \div 12 = 6$  ·  $3 \div 3 = 1$  ·  $30 \div 3 = 10$  ·  $108 \div 9 = 12$