



# The Diamond City Park Mystery

Grade 8 math · Addition, Multiplication, Rounding, Word problems, Division · Reading level grades 7-9

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

On the eve of the championship game, someone snuck into the stadium, swapped the golden trophy with a giant rubber baseball, and scattered clues across the field. Detective work is needed to analyze the evidence and unmask 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 stadium prankster is** \_\_\_\_\_

## Possible suspects

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

| NAME             | PITCHING STYLE | BATTING STANCE  | THROWING HAND | CAP COLOR   | FAVORITE SNACK  |
|------------------|----------------|-----------------|---------------|-------------|-----------------|
| Derek Jeter      | Curveball      | Wide Stance     | Left-handed   | Gold Cap    | Chewing Gum     |
| Ty Cobb          | Curveball      | Wide Stance     | Left-handed   | Crimson Cap | Cracker Jacks   |
| Hank Aaron       | Curveball      | Crouched Stance | Left-handed   | Navy Cap    | Cracker Jacks   |
| Mike Trout       | Changeup       | Square Stance   | Right-handed  | Crimson Cap | Sunflower Seeds |
| Roberto Clemente | Fastball       | Square Stance   | Left-handed   | Crimson Cap | Chewing Gum     |
| Nolan Ryan       | Knuckleball    | Wide Stance     | Right-handed  | Crimson Cap | Cracker Jacks   |
| Ken Griffey      | Fastball       | Wide Stance     | Right-handed  | Navy Cap    | Chewing Gum     |
| Willie Mays      | Sinkerball     | Crouched Stance | Left-handed   | Navy Cap    | Cracker Jacks   |
| Mookie Betts     | Sinkerball     | Crouched Stance | Right-handed  | Crimson Cap | Sunflower Seeds |
| Ted Williams     | Fastball       | Square Stance   | Right-handed  | Navy Cap    | Sunflower Seeds |
| Babe Ruth        | Knuckleball    | Closed Stance   | Left-handed   | Gold Cap    | Chewing Gum     |
| Aaron Judge      | Changeup       | Open Stance     | Left-handed   | Crimson Cap | Cracker Jacks   |
| Cal Ripken       | Knuckleball    | Square Stance   | Right-handed  | Crimson Cap | Sunflower Seeds |
| Sandy Koufax     | Knuckleball    | Crouched Stance | Right-handed  | Crimson Cap | Cracker Jacks   |
| Justin Verlander | Changeup       | Closed Stance   | Right-handed  | Crimson Cap | Sunflower Seeds |
| Clayton Kershaw  | Changeup       | Square Stance   | Left-handed   | Crimson Cap | Chewing Gum     |
| Lou Gehrig       | Sinkerball     | Crouched Stance | Left-handed   | Crimson Cap | Sunflower Seeds |
| Jackie Robinson  | Curveball      | Crouched Stance | Right-handed  | Crimson Cap | Cracker Jacks   |
| Shohei Ohtani    | Sinkerball     | Closed Stance   | Right-handed  | Navy Cap    | Cracker Jacks   |
| Cy Young         | Curveball      | Open Stance     | Left-handed   | Navy Cap    | Chewing Gum     |
| Max Scherzer     | Changeup       | Open Stance     | Right-handed  | Crimson Cap | Sunflower Seeds |

## CLUE 1



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

Diagram showing the arrangement of 18 numbered boxes in two rows. The top row has 12 boxes, and the bottom row has 6 boxes. The boxes are numbered 9433, 5175, 3215, 4428, 4707, 4428, 8346, 3215, 4972, 9433, 5915, 9783, 3215, 4428, 3030, 9783, 9433. The boxes with numbers 9433, 4972, and 9433 are highlighted in orange.

$$6281 + 3152 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{T}}$$

$$2814 + 2361 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{H}}$$

$$2097 + 2875 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{C}}$$

$1157 + 1873 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{N}}$

$$5099 + 4684 = \boxed{\phantom{0000}} \rightarrow \boxed{0}$$

$$5211 + 3135 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{P}}$$

$$2004 + 1365 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{L}}$$

$$2203 + 1478 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{A}}$$

$$2116 + 2312 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{S}}$$

$$1088 + 2127 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{E}}$$

$$1984 + 2723 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{U}}$$

$$3731 + 2184 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{D}}$$

Scratch space:

**CLUE 2**
**Multiplication facts (1-12)**

The groundskeeper arranged stadium seats in equal rows to determine capacity.

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

|          |    |    |    |   |    |   |          |    |   |    |   |   |    |    |    |    |
|----------|----|----|----|---|----|---|----------|----|---|----|---|---|----|----|----|----|
| <b>A</b> |    |    |    |   |    |   | <b>A</b> |    |   |    |   |   |    |    |    |    |
| 132      | 80 | 70 | 35 | 1 | 36 | 1 | 132      | 11 | 3 | 44 | 3 | 9 | 80 | 70 | 11 | 36 |

  

|    |          |    |   |    |    |   |    |          |     |    |    |
|----|----------|----|---|----|----|---|----|----------|-----|----|----|
|    | <b>A</b> |    |   |    |    |   |    | <b>A</b> |     |    |    |
| 20 | 132      | 25 | 2 | 11 | 36 | 1 | 44 | 77       | 132 | 25 | 44 |

$12 \times 11 = \square \rightarrow \text{A}$

$4 \times 5 = \square \rightarrow \text{W}$

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

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

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

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

$4 \times 11 = \square \rightarrow \text{E}$

$10 \times 8 = \square \rightarrow \text{R}$

$5 \times 7 = \square \rightarrow \text{G}$

$1 \times 1 = \square \rightarrow \text{H}$

$1 \times 2 = \square \rightarrow \text{O}$

$11 \times 1 = \square \rightarrow \text{N}$

$3 \times 3 = \square \rightarrow \text{P}$

$10 \times 7 = \square \rightarrow \text{I}$

Scratch space:

### CLUE 3 Rounding

The pitch speed radar gun displayed rounded velocity numbers for each ball.

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

|      |      |     |     |      |      |      |      |      |      |      |      |      |      |     |     |     |     |      |
|------|------|-----|-----|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|------|
| S    |      |     |     |      |      |      |      |      | S    |      |      |      | S    |     |     |     |     | S    |
| 5000 | 2300 | 500 | 20  | 200  | 2900 | 2000 | 230  | 3000 | 5000 | 230  | 230  | 1100 | 5000 | 700 | 230 | 200 | 200 | 5000 |
|      |      |     |     |      |      |      |      |      |      |      |      |      |      |     |     |     |     |      |
| 7000 | 2900 | 370 | 230 | 3000 | 230  | 1100 | 1100 | 2300 | 3700 | 2900 | 2300 | 30   |      |     |     |     |     |      |

Round 4,990 to the nearest thousand  → **S**

Round 33 to the nearest ten  → **T**

Round 2,921 to the nearest hundred  → **O**

Round 3,727 to the nearest hundred  → **G**

Round 453 to the nearest hundred  → **N**

Round 3,151 to the nearest thousand  → **R**

Round 678 to the nearest hundred  → **H**

Round 2,328 to the nearest hundred  → **U**

Round 24 to the nearest ten  → **F**

Round 242 to the nearest hundred  → **L**

Round 371 to the nearest ten  → **V**

Round 7,459 to the nearest thousand  → **C**

Round 227 to the nearest ten  → **E**

Round 1,588 to the nearest thousand  → **W**

Round 1,066 to the nearest hundred  → **D**

Scratch space:

## CLUE 4

## Word problems

Concession stand receipts provided clues about where the suspect ordered snacks.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A strand of C        C A P hair turned up at the scene.

36      105      87      80      103      120      41      36

There were 58 helmets. 22 were used up. How many helmets are left?

Answer:  → C

Equipment manager found 2 helmets yesterday and 39 more today. How many helmets in all?

Answer:  → N

Equipment manager found 75 cleats yesterday and 12 more today. How many cleats in all?

Answer:  → I

Equipment manager found 108 bats yesterday and 12 more today. How many bats in all?

Answer:  → O

Equipment manager found 86 bats yesterday and 19 more today. How many bats in all?

Answer:  → R

Equipment manager found 24 gloves yesterday and 79 more today. How many gloves in all?

Answer:  → S

Equipment manager found 77 bats yesterday and 3 more today. How many bats in all?

Answer:  → M

Scratch space:

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

Dividing the ball collection into practice buckets revealed key evidence numbers.

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:**

$84 \div 7 = \boxed{\phantom{00}}$

$40 \div 4 = \boxed{\phantom{00}}$

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

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

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

$99 \div 9 = \boxed{\phantom{00}}$

$12 \div 4 = \boxed{\phantom{00}}$

$10 \div 5 = \boxed{\phantom{00}}$

$18 \div 2 = \boxed{\phantom{00}}$

$45 \div 9 = \boxed{\phantom{00}}$

$48 \div 6 = \boxed{\phantom{00}}$

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

1. The villain launched a high fastball, then swung from a wide stance.
2. The villain launched a high fastball, then hit from a crouched stance.
3. The villain threw a sneaky knuckleball, then swung from a wide stance.
4. The villain dropped a slow changeup, then stood in a square stance.
5. The villain fired a heavy sinkerball, then lined up in a closed stance.
6. The villain launched a high fastball, then swung from an open stance.
7. The villain threw a sneaky knuckleball, then stood in a square stance.
8. The villain fired a heavy sinkerball, then swung from an open stance.
9. The villain threw a sharp curveball, then swung from an open stance.
10. The villain fired a heavy sinkerball, then hit from a crouched stance.
11. The villain launched a high fastball, then stood in a square stance.
12. The villain dropped a slow changeup, then swung from an open stance.

# Answer Key

## The Diamond City Park Mystery

### Culprit: Cal Ripken

Knuckleball · Square Stance · Right-handed · Crimson Cap · Sunflower Seeds

Trail: Start 21 → Clue 1 18 → Clue 2 9 → Clue 3 5 → Clue 4 4 → Clue 5 1

#### Clue 1 (Addition): "THE SUSPECT DOES NOT USE A CLOSED STANCE"

$6281 + 3152 = 9433$  (T) ·  $2814 + 2361 = 5175$  (H) ·  $2097 + 2875 = 4972$  (C) ·  $1157 + 1873 = 3030$  (N) ·  $5099 + 4684 = 9783$  (O) ·  $5211 + 3135 = 8346$  (P) ·  $2004 + 1365 = 3369$  (L) ·  $2203 + 1478 = 3681$  (A) ·  $2116 + 2312 = 4428$  (S) ·  $1088 + 2127 = 3215$  (E) ·  $1984 + 2723 = 4707$  (U) ·  $3731 + 2184 = 5915$  (D)

#### Clue 2 (Multiplication facts (1-12)): "A RIGHT HANDED PRINT WAS ON THE BASE"

$12 \times 11 = 132$  (A) ·  $4 \times 5 = 20$  (W) ·  $5 \times 5 = 25$  (S) ·  $1 \times 3 = 3$  (D) ·  $11 \times 7 = 77$  (B) ·  $9 \times 4 = 36$  (T) ·  $4 \times 11 = 44$  (E) ·  $10 \times 8 = 80$  (R) ·  $5 \times 7 = 35$  (G) ·  $1 \times 1 = 1$  (H) ·  $1 \times 2 = 2$  (O) ·  $11 \times 1 = 11$  (N) ·  $3 \times 3 = 9$  (P) ·  $10 \times 7 = 70$  (I)

#### Clue 3 (Rounding): "SUNFLOWER SEED SHELLS COVERED DUGOUT"

Round 4,990 to the nearest thousand = 5000 (S) · Round 33 to the nearest ten = 30 (T) · Round 2,921 to the nearest hundred = 2900 (O) · Round 3,727 to the nearest hundred = 3700 (G) · Round 453 to the nearest hundred = 500 (N) · Round 3,151 to the nearest thousand = 3000 (R) · Round 678 to the nearest hundred = 700 (H) · Round 2,328 to the nearest hundred = 2300 (U) · Round 24 to the nearest ten = 20 (F) · Round 242 to the nearest hundred = 200 (L) · Round 371 to the nearest ten = 370 (V) · Round 7,459 to the nearest thousand = 7000 (C) · Round 227 to the nearest ten = 230 (E) · Round 1,588 to the nearest thousand = 2000 (W) · Round 1,066 to the nearest hundred = 1100 (D)

#### Clue 4 (Word problems): "CRIMSON CAP"

There were 58 helmets. 22 were used up. How many helmets are left? = 36 (C) · Equipment manager found 2 helmets yesterday and 39 more today. How many helmets in all? = 41 (N) · Equipment manager found 75 cleats yesterday and 12 more today. How many cleats in all? = 87 (I) · Equipment manager found 108 bats yesterday and 12 more today. How many bats in all? = 120 (O) · Equipment manager found 86 bats yesterday and 19 more today. How many bats in all? = 105 (R) · Equipment manager found 24 gloves yesterday and 79 more today. How many gloves in all? = 103 (S) · Equipment manager found 77 bats yesterday and 3 more today. How many bats in all? = 80 (M)

#### Clue 5 (Division facts (1-12)): surviving statement is box 7 → Cal Ripken

$84 \div 7 = 12$  ·  $40 \div 4 = 10$  ·  $28 \div 7 = 4$  ·  $36 \div 6 = 6$  ·  $7 \div 7 = 1$  ·  $99 \div 9 = 11$  ·  $12 \div 4 = 3$  ·  $10 \div 5 = 2$  ·  $18 \div 2 = 9$  ·  $45 \div 9 = 5$  ·  $48 \div 6 = 8$