



# The Golden Paw Volleyball Mystery

Grade 5 math · Multiplication, Word problems, Fractions of a number, Order of operations, Division · Reading level grades 7-9

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

Right before the championship match of the Bark & Spike League, the official trophy disappeared from the referee stand. Detective, examine the clues and solve the puzzle to catch 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 trophy thief is** \_\_\_\_\_

## Possible suspects

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

| NAME              | SIGNATURE PLAY | GEAR BRAND  | SERVING HAND | FUR COLOR   | DISTRACTION  |
|-------------------|----------------|-------------|--------------|-------------|--------------|
| Micah Christenson | Block Jump     | Pawsitive   | Right Handed | Spotted Fur | Belly Rubs   |
| Foluke Akinradewo | Setter Dump    | CanineKnees | Right Handed | Spotted Fur | Squeaky Toys |
| Justyn Toth       | Setter Dump    | CanineKnees | Left Handed  | Black Fur   | Belly Rubs   |
| Daisy Set         | Block Jump     | CanineKnees | Left Handed  | Golden Fur  | Belly Rubs   |
| Milo Libero       | Backrow Attack | SpikePup    | Right Handed | Golden Fur  | Belly Rubs   |
| Buster Paws       | Setter Dump    | BarkNet     | Right Handed | Spotted Fur | Squeaky Toys |
| Jordan Larson     | Setter Dump    | Pawsitive   | Left Handed  | Golden Fur  | Tennis Balls |
| Barkley Digs      | Jump Serve     | BarkNet     | Left Handed  | Spotted Fur | Belly Rubs   |
| Erik Shoji        | Block Jump     | BarkNet     | Left Handed  | Black Fur   | Belly Rubs   |
| Tori Dixon        | Diving Dig     | Pawsitive   | Right Handed | Spotted Fur | Squeaky Toys |
| Bella Ace         | Setter Dump    | SpikePup    | Right Handed | Spotted Fur | Belly Rubs   |
| Duke Bump         | Jump Serve     | SpikePup    | Right Handed | Golden Fur  | Belly Rubs   |
| Cooper Setter     | Jump Serve     | BarkNet     | Right Handed | Black Fur   | Tennis Balls |
| Karch Kiraly      | Block Jump     | SpikePup    | Right Handed | Golden Fur  | Tennis Balls |
| Sadie Server      | Block Jump     | BarkNet     | Right Handed | Black Fur   | Tennis Balls |
| Luna Spiker       | Diving Dig     | CanineKnees | Right Handed | Spotted Fur | Squeaky Toys |
| Misty May         | Backrow Attack | SpikePup    | Left Handed  | Spotted Fur | Squeaky Toys |
| Charlie Block     | Setter Dump    | GoldenGrip  | Right Handed | Golden Fur  | Belly Rubs   |
| April Ross        | Diving Dig     | CanineKnees | Left Handed  | Golden Fur  | Squeaky Toys |
| Rover Spike       | Backrow Attack | Pawsitive   | Right Handed | Golden Fur  | Squeaky Toys |
| Logan Tom         | Diving Dig     | GoldenGrip  | Right Handed | Spotted Fur | Squeaky Toys |

## Multiplication facts (1-12)

To count the rows of volleyballs stacked in the equipment shed, calculate the total inventory.

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

|    |    |   |    |    |    |    |   |     |    |    |    |    |    |     |    |    |   |
|----|----|---|----|----|----|----|---|-----|----|----|----|----|----|-----|----|----|---|
| T  |    |   |    |    |    |    |   |     | T  |    |    |    |    |     |    |    | T |
| 72 | 54 | 4 | 11 | 21 | 11 | 15 | 4 | 3   | 72 | 66 | 27 | 4  | 11 | 108 | 27 | 72 |   |
|    |    |   |    |    |    |    |   |     |    |    |    |    |    |     |    |    |   |
| 21 | 11 | 4 | 22 | 27 | 28 | 66 | 4 | 108 | 22 | 99 | 63 | 15 | 22 | 4   | 40 | 99 |   |

$8 \times 9 = \square \rightarrow \boxed{\mathbf{T}}$

$11 \times 2 = \square \rightarrow \mathbf{G}$

$7 \times 4 = \square \rightarrow \boxed{\text{L}}$

$7 \times 9 = \square \rightarrow \boxed{\text{I}}$

$$9 \times 3 = \boxed{\phantom{00}} \rightarrow \boxed{0}$$

$10 \times 4 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{A}}$

$$7 \times 3 = \boxed{\phantom{00}} \rightarrow \boxed{\text{U}}$$

$$3 \times 1 = \boxed{\phantom{00}} \rightarrow \boxed{\text{C}}$$

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

$$9 \times 6 = \boxed{\phantom{00}} \rightarrow \boxed{\text{H}}$$

$$9 \times 12 = \boxed{\phantom{000}} \rightarrow \boxed{\text{N}}$$

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

$11 \times 1 = \boxed{\phantom{00}} \rightarrow \mathbf{S}$

$$9 \times 11 = \boxed{\phantom{00}} \rightarrow \boxed{\text{R}}$$

$$6 \times 11 = \boxed{\phantom{00}} \rightarrow \boxed{\text{D}}$$

Scratch space:

## CLUE 2

## Word problems

Coach Retriever tracks team points and practice penalties to uncover key evidence.

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

A witness saw the villain was 

|     |     |    |     |    |     |    |    |  |   |   |   |
|-----|-----|----|-----|----|-----|----|----|--|---|---|---|
| R   |     |    |     |    |     |    |    |  | D | E | D |
| 113 | 118 | 88 | 119 | 79 | 119 | 18 | 16 |  |   |   |   |

.

There were 144 treat bags. 31 were used up. How many treat bags are left?

Answer:  → **R**

There were 132 treat bags. 13 were used up. How many treat bags are left?

Answer:  → **H**

There were 33 treat bags. 17 were used up. How many treat bags are left?

Answer:  → **N**

There were 121 chew toys. 33 were used up. How many chew toys are left?

Answer:  → **G**

There were 85 kneepads. 6 were used up. How many kneepads are left?

Answer:  → **T**

Coach Retriever lined up 3 rows of 6 whistles. How many whistles in all?

Answer:  → **A**

There were 123 volleyballs. 5 were used up. How many volleyballs are left?

Answer:  → **I**

Scratch space:

**CLUE 3**
**Fractions of a number**

Only a fraction of the court lights are working before the night championship match.

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

|          |   |    |    |    |   |   |   |    |    |    |    |    |    |    |    |    |          |   |    |
|----------|---|----|----|----|---|---|---|----|----|----|----|----|----|----|----|----|----------|---|----|
| <b>T</b> |   |    |    |    |   |   |   |    |    |    |    |    |    |    |    |    | <b>T</b> |   |    |
| 18       | 7 | 30 | 11 | 13 | 9 | 9 | 8 | 13 | 39 | 20 | 35 | 25 | 10 | 10 | 30 | 20 | 18       | 7 | 30 |

  

|   |   |   |   |    |    |    |   |    |    |    |    |   |    |    |    |          |    |  |
|---|---|---|---|----|----|----|---|----|----|----|----|---|----|----|----|----------|----|--|
|   |   |   |   |    |    |    |   |    |    |    |    |   |    |    |    | <b>T</b> |    |  |
| 2 | 8 | 9 | 9 | 34 | 25 | 35 | 8 | 29 | 21 | 16 | 30 | 8 | 19 | 23 | 18 | 25       | 23 |  |

$3/5 \text{ of } 30 = \square \rightarrow \text{ **T** }$

$3/10 \text{ of } 70 = \square \rightarrow \text{ **Q** }$

$1/10 \text{ of } 110 = \square \rightarrow \text{ **V** }$

$1/10 \text{ of } 190 = \square \rightarrow \text{ **K** }$

$1/4 \text{ of } 28 = \square \rightarrow \text{ **H** }$

$1/5 \text{ of } 115 = \square \rightarrow \text{ **Y** }$

$2/6 \text{ of } 105 = \square \rightarrow \text{ **R** }$

$1/6 \text{ of } 60 = \square \rightarrow \text{ **P** }$

$4/8 \text{ of } 60 = \square \rightarrow \text{ **E** }$

$4/6 \text{ of } 3 = \square \rightarrow \text{ **B** }$

$4/10 \text{ of } 85 = \square \rightarrow \text{ **F** }$

$2/8 \text{ of } 80 = \square \rightarrow \text{ **D** }$

$1/4 \text{ of } 32 = \square \rightarrow \text{ **A** }$

$5/10 \text{ of } 78 = \square \rightarrow \text{ **N** }$

$1/4 \text{ of } 116 = \square \rightarrow \text{ **S** }$

$2/4 \text{ of } 18 = \square \rightarrow \text{ **L** }$

$5/10 \text{ of } 26 = \square \rightarrow \text{ **I** }$

$1/5 \text{ of } 80 = \square \rightarrow \text{ **U** }$

$2/8 \text{ of } 100 = \square \rightarrow \text{ **O** }$

Scratch space:

**CLUE 4**
**Order of operations**

Solving the multi-step tournament formula unlocks the master lock on the locker room door.

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

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|
| S  |    |    |    |    |    |    |    |    |    |    |    | S  |    |    |    |   |    |
| 39 | 71 | 44 | 13 | 13 | 55 | 73 | 78 | 72 | 18 | 30 | 76 | 39 | 78 | 44 | 72 | 9 | 73 |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |
| 49 | 9  | 13 | 28 | 55 | 25 | 44 | 48 | 62 | 55 | 18 | 18 | 44 | 44 | 27 |    |   |    |

$6 \times 11 - 27 = \boxed{\phantom{00}} \rightarrow \boxed{\text{S}}$

$4 \times 12 - 4 = \boxed{\phantom{00}} \rightarrow \boxed{\text{O}}$

$3 \times 12 - 18 = \boxed{\phantom{00}} \rightarrow \boxed{\text{R}}$

$24 + 8 \times 6 = \boxed{\phantom{00}} \rightarrow \boxed{\text{U}}$

$14 + 8 \times 6 = \boxed{\phantom{00}} \rightarrow \boxed{\text{K}}$

$8 \times 8 - 9 = \boxed{\phantom{00}} \rightarrow \boxed{\text{E}}$

$5 \times 5 - 16 = \boxed{\phantom{00}} \rightarrow \boxed{\text{N}}$

$8 \times 9 - 1 = \boxed{\phantom{00}} \rightarrow \boxed{\text{P}}$

$21 + 2 \times 3 = \boxed{\phantom{00}} \rightarrow \boxed{\text{M}}$

$4 \times 8 - 4 = \boxed{\phantom{00}} \rightarrow \boxed{\text{H}}$

$24 + 3 \times 2 = \boxed{\phantom{00}} \rightarrow \boxed{\text{W}}$

$8 \times 10 - 4 = \boxed{\phantom{00}} \rightarrow \boxed{\text{A}}$

$74 + 2 \times 2 = \boxed{\phantom{00}} \rightarrow \boxed{\text{F}}$

$37 + 4 \times 3 = \boxed{\phantom{00}} \rightarrow \boxed{\text{I}}$

$49 + 3 \times 8 = \boxed{\phantom{00}} \rightarrow \boxed{\text{D}}$

$5 + 2 \times 4 = \boxed{\phantom{00}} \rightarrow \boxed{\text{T}}$

$27 + 3 \times 7 = \boxed{\phantom{00}} \rightarrow \boxed{\text{C}}$

$10 + 3 \times 5 = \boxed{\phantom{00}} \rightarrow \boxed{\text{L}}$

Scratch space:

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

Dividing the extra water bottles evenly among the players uncovers a hidden message.

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:**

$12 \div 3 = \boxed{\phantom{00}}$

$15 \div 3 = \boxed{\phantom{00}}$

$24 \div 2 = \boxed{\phantom{00}}$

$27 \div 3 = \boxed{\phantom{00}}$

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

$44 \div 4 = \boxed{\phantom{00}}$

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

$14 \div 2 = \boxed{\phantom{00}}$

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

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

$36 \div 12 = \boxed{\phantom{00}}$

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

1. The villain spiked the volleyball into the lights, then checked their BarkNet sleeves.
2. The villain blocked the opponent at the net, then checked their BarkNet sleeves.
3. The villain spiked the volleyball into the lights, then strapped on their GoldenGrip gloves.
4. The villain dumped the ball over the net, then adjusted their CanineKnees pads.
5. The villain dumped the ball over the net, then checked their BarkNet sleeves.
6. The villain blocked the opponent at the net, then pulled on their Pawsitive socks.
7. The villain dumped the ball over the net, then laced up their SpikePup sneakers.
8. The villain dug the match ball into the bleachers, then pulled on their Pawsitive socks.
9. The villain spiked the volleyball into the lights, then adjusted their CanineKnees pads.
10. The villain blocked the opponent at the net, then adjusted their CanineKnees pads.
11. The villain dumped the ball over the net, then pulled on their Pawsitive socks.
12. The villain dug the match ball into the bleachers, then adjusted their CanineKnees pads.

# Answer Key

## The Golden Paw Volleyball Mystery

### Culprit: Tori Dixon

Diving Dig · Pawsitive · Right Handed · Spotted Fur · Squeaky Toys

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 5 → Clue 4 4 → Clue 5 1

### Clue 1 (Multiplication facts (1-12)): "THE SUSPECT DOES NOT USE GOLDENGRIP GEAR"

$8 \times 9 = 72$  (T) ·  $11 \times 2 = 22$  (G) ·  $7 \times 4 = 28$  (L) ·  $7 \times 9 = 63$  (I) ·  $9 \times 3 = 27$  (O) ·  $10 \times 4 = 40$  (A) ·  $7 \times 3 = 21$  (U) ·  $3 \times 1 = 3$  (C) ·  $5 \times 3 = 15$  (P) ·  $9 \times 6 = 54$  (H) ·  $9 \times 12 = 108$  (N) ·  $2 \times 2 = 4$  (E) ·  $11 \times 1 = 11$  (S) ·  $9 \times 11 = 99$  (R) ·  $6 \times 11 = 66$  (D)

### Clue 2 (Word problems): "RIGHT HANDED"

There were 144 treat bags. 31 were used up. How many treat bags are left? = 113 (R) · There were 132 treat bags. 13 were used up. How many treat bags are left? = 119 (H) · There were 33 treat bags. 17 were used up. How many treat bags are left? = 16 (N) · There were 121 chew toys. 33 were used up. How many chew toys are left? = 88 (G) · There were 85 kneepads. 6 were used up. How many kneepads are left? = 79 (T) · Coach Retriever lined up 3 rows of 6 whistles. How many whistles in all? = 18 (A) · There were 123 volleyballs. 5 were used up. How many volleyballs are left? = 118 (I)

### Clue 3 (Fractions of a number): "THE VILLAIN DROPPED THE BALL FOR A SQUEAKY TOY"

$\frac{3}{5}$  of 30 = 18 (T) ·  $\frac{3}{10}$  of 70 = 21 (Q) ·  $\frac{1}{10}$  of 110 = 11 (V) ·  $\frac{1}{10}$  of 190 = 19 (K) ·  $\frac{1}{4}$  of 28 = 7 (H) ·  $\frac{1}{5}$  of 115 = 23 (Y) ·  $\frac{2}{6}$  of 105 = 35 (R) ·  $\frac{1}{6}$  of 60 = 10 (P) ·  $\frac{4}{8}$  of 60 = 30 (E) ·  $\frac{4}{6}$  of 3 = 2 (B) ·  $\frac{4}{10}$  of 85 = 34 (F) ·  $\frac{2}{8}$  of 80 = 20 (D) ·  $\frac{1}{4}$  of 32 = 8 (A) ·  $\frac{5}{10}$  of 78 = 39 (N) ·  $\frac{1}{4}$  of 116 = 29 (S) ·  $\frac{2}{4}$  of 18 = 9 (L) ·  $\frac{5}{10}$  of 26 = 13 (I) ·  $\frac{1}{5}$  of 80 = 16 (U) ·  $\frac{2}{8}$  of 100 = 25 (O)

### Clue 4 (Order of operations): "SPOTTED FUR WAS FOUND IN THE LOCKER ROOM"

$6 \times 11 - 27 = 39$  (S) ·  $4 \times 12 - 4 = 44$  (O) ·  $3 \times 12 - 18 = 18$  (R) ·  $24 + 8 \times 6 = 72$  (U) ·  $14 + 8 \times 6 = 62$  (K) ·  $8 \times 8 - 9 = 55$  (E) ·  $5 \times 5 - 16 = 9$  (N) ·  $8 \times 9 - 1 = 71$  (P) ·  $21 + 2 \times 3 = 27$  (M) ·  $4 \times 8 - 4 = 28$  (H) ·  $24 + 3 \times 2 = 30$  (W) ·  $8 \times 10 - 4 = 76$  (A) ·  $74 + 2 \times 2 = 78$  (F) ·  $37 + 4 \times 3 = 49$  (I) ·  $49 + 3 \times 8 = 73$  (D) ·  $5 + 2 \times 4 = 13$  (T) ·  $27 + 3 \times 7 = 48$  (C) ·  $10 + 3 \times 5 = 25$  (L)

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

$12 \div 3 = 4$  ·  $15 \div 3 = 5$  ·  $24 \div 2 = 12$  ·  $27 \div 3 = 9$  ·  $24 \div 12 = 2$  ·  $44 \div 4 = 11$  ·  $5 \div 5 = 1$  ·  $14 \div 2 = 7$  ·  $24 \div 4 = 6$  ·  $100 \div 10 = 10$  ·  $36 \div 12 = 3$