



The Golden Whistle Mystery

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

Detective: _____ **Date:** _____

The golden whistle has vanished right before the final buzzer! The Championship Arena is in lockdown, and Coach needs your help to crack the case. Find out who stole the whistle so the big game can finish!

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 The Hoop 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 MOVE	LUCKY GEAR	SHOOTING HAND	HEADBAND COLOR	COURT DISTRACTION
LeBron	Three-Point Swish	Glow-in-the-Dark Socks	Right-Handed Shooter	Neon Green Headband	Smell of Fresh Popcorn
Kobe	Ankle-Breaker Crossover	Gold High-Tops	Left-Handed Shooter	Electric Blue Headband	Shiny Camera Flashes
Hoops Hannah	Half-Court Hook Shot	Squeaky Sneakers	Right-Handed Shooter	Electric Blue Headband	Loud Squeaky Toys
Crossover Chris	Half-Court Hook Shot	Sparkly Elbow Pad	Right-Handed Shooter	Bright Orange Headband	Smell of Fresh Popcorn
Bouncing Billy	Sky-High Dunk	Gold High-Tops	Right-Handed Shooter	Electric Blue Headband	Smell of Fresh Popcorn
Fastbreak Fred	Half-Court Hook Shot	Sparkly Elbow Pad	Left-Handed Shooter	Neon Green Headband	Smell of Fresh Popcorn
Swish Sarah	Half-Court Hook Shot	Silver Wristband	Right-Handed Shooter	Neon Green Headband	Loud Squeaky Toys
Net-Ripper Niki	Ankle-Breaker Crossover	Sparkly Elbow Pad	Left-Handed Shooter	Bright Orange Headband	Loud Squeaky Toys
Magic	Ankle-Breaker Crossover	Glow-in-the-Dark Socks	Left-Handed Shooter	Bright Orange Headband	Shiny Camera Flashes
Pivot Pete	No-Look Pass	Sparkly Elbow Pad	Left-Handed Shooter	Neon Green Headband	Loud Squeaky Toys
Spud	Three-Point Swish	Squeaky Sneakers	Left-Handed Shooter	Bright Orange Headband	Loud Squeaky Toys
Steph	Sky-High Dunk	Sparkly Elbow Pad	Right-Handed Shooter	Electric Blue Headband	Shiny Camera Flashes
Giannis	Half-Court Hook Shot	Squeaky Sneakers	Left-Handed Shooter	Electric Blue Headband	Shiny Camera Flashes
Rim-Rocker Rex	Half-Court Hook Shot	Squeaky Sneakers	Left-Handed Shooter	Electric Blue Headband	Loud Squeaky Toys
Bird	No-Look Pass	Sparkly Elbow Pad	Left-Handed Shooter	Bright Orange Headband	Loud Squeaky Toys
Dribbling Danny	Sky-High Dunk	Silver Wristband	Left-Handed Shooter	Bright Orange Headband	Loud Squeaky Toys
Dunkin Dave	Sky-High Dunk	Glow-in-the-Dark Socks	Left-Handed Shooter	Electric Blue Headband	Smell of Fresh Popcorn
Luka	Sky-High Dunk	Sparkly Elbow Pad	Right-Handed Shooter	Neon Green Headband	Smell of Fresh Popcorn
Defense Daisy	Half-Court Hook Shot	Silver Wristband	Right-Handed Shooter	Bright Orange Headband	Loud Squeaky Toys
Backboard Bob	Half-Court Hook Shot	Sparkly Elbow Pad	Left-Handed Shooter	Bright Orange Headband	Smell of Fresh Popcorn
Jordan	Three-Point Swish	Gold High-Tops	Left-Handed Shooter	Bright Orange Headband	Loud Squeaky Toys

CLUE 1 Place value

We checked the giant digital scoreboard for clues. The score was broken, but looking at the value of the hundreds digit showed us who went past the gates.

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

T																T
800	80	1000	500	2000	10	10	9000	2000	300	7000	8000	1000	5000	300	8000	800
90	1000	9000	600	4000	8000	10	7000	80	2000	4000	80	T				

What is the value of the 8 in 5,896? → **T**

What is the value of the 5 in 9,578? → **V**

What is the value of the 9 in 1,496? → **W**

What is the value of the 1 in 103? → **P**

What is the value of the 8 in 6,683? → **H**

What is the value of the 3 in 7,391? → **N**

What is the value of the 4 in 4,232? → **G**

What is the value of the 5 in 5,366? → **S**

What is the value of the 1 in 51,543? → **E**

What is the value of the 8 in 98,430? → **O**

What is the value of the 7 in 67,234? → **D**

What is the value of the 1 in 4,210? → **L**

What is the value of the 6 in 4,600? → **R**

What is the value of the 2 in 2,618? → **I**

What is the value of the 9 in 89,218? → **A**

Scratch space:

Multiplication facts (1-12)

Coach counted the basketballs on the racks. There were five rows with seven balls in each row, revealing a secret shoe size.

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

Diagram illustrating a sequence of numbers in boxes. The sequence is divided into two rows. The top row contains 12 boxes, and the bottom row contains 16 boxes. The boxes are labeled with numbers, and the boxes containing the number 30 are highlighted in orange and labeled with a 'T'.

Top row (12 boxes): 30 (T), 1, 70, 16, 66, 30 (T), 55, 1, 8, 66, 120, 120, 27, 66, 54.

Bottom row (16 boxes): 30 (T), 1, 36, 15, 27, 12, 8, 56, 66, 120, 70, 90, 30 (T), 1, 66, 12, 108, 70, 36.

$6 \times 5 = \boxed{} \rightarrow \boxed{\text{T}}$

$$5 \times 11 = \boxed{} \rightarrow \boxed{\text{C}}$$

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

$9 \times 12 = \boxed{} \rightarrow \boxed{\text{D}}$

$3 \times 4 = \boxed{} \rightarrow \boxed{\text{N}}$

$4 \times 9 = \boxed{} \rightarrow \boxed{\text{R}}$

$9 \times 6 = \square \rightarrow \boxed{\mathbf{S}}$

$4 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$7 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{Y}}$$

$$8 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{M}}$$

$10 \times 9 = \boxed{} \rightarrow \boxed{\mathbf{F}}$

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

$10 \times 12 = \boxed{} \rightarrow \boxed{\text{L}}$

$3 \times 9 = \square \rightarrow \boxed{\mathbf{W}}$

$10 \times 7 = \boxed{} \rightarrow \boxed{\text{E}}$

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

Scratch space:

CLUE 3 Subtraction

The mascot had a bag of sixty whistles but lost eighteen of them on the court. Finding the difference pointed us to the right locker room.

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

T												T										
6748	4287	1969	8492	6352	5440	1969	8445	7819	1676	6748	4966	1676	8492	4966	5440	7119	4241					

								T														T
6739	3212	4966	3039	7819	1969	4241	6748	4287	1969	5783	8951	8492	4287	4966	6748							

8819 - 2071 = → T	8810 - 365 = → A	10092 - 2973 = → N
3493 - 281 = → L	5776 - 336 = → U	7079 - 1296 = → I
5566 - 1325 = → D	8569 - 4282 = → H	2409 - 733 = → Y
12643 - 4151 = → S	10566 - 4214 = → Q	3618 - 579 = → C
9723 - 4757 = → O	4774 - 2805 = → E	8487 - 1748 = → B
8962 - 1143 = → K	11918 - 2967 = → R	

Scratch space:

CLUE 4 Addition

The concession stand tally showed twenty-four hot dogs and thirty-six sodas sold during the game. Adding these up gave us a clue about the thief's gear.

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

A				A							A			A		
2291	8712	3217	4846	2291	8712	8870	2870	9443	6584	4846	2870	2291	7769	7334	2291	2578

	A													
2648	2291	6886	8870	6584	9443	3217	8712	9443	6584	2870	6584	3217	3217	8828

$1061 + 1230 = \square \rightarrow \text{A}$

$1605 + 1043 = \square \rightarrow \text{C}$

$3074 + 1772 = \square \rightarrow \text{R}$

$3680 + 4089 = \square \rightarrow \text{D}$

$2745 + 4141 = \square \rightarrow \text{U}$

$1165 + 1705 = \square \rightarrow \text{E}$

$4718 + 4110 = \square \rightarrow \text{P}$

$1058 + 2159 = \square \rightarrow \text{O}$

$1149 + 1429 = \square \rightarrow \text{S}$

$2903 + 3681 = \square \rightarrow \text{H}$

$3234 + 4100 = \square \rightarrow \text{W}$

$3701 + 5169 = \square \rightarrow \text{G}$

$3225 + 5487 = \square \rightarrow \text{N}$

$4499 + 4944 = \square \rightarrow \text{T}$

Scratch space:

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

We had twenty-eight practice cones to share equally among four drill stations. Finding how many cones went to each station gave us the final hint.

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:

$25 \div 5 = \boxed{}$

$36 \div 6 = \boxed{}$

$8 \div 1 = \boxed{}$

$2 \div 2 = \boxed{}$

$100 \div 10 = \boxed{}$

$84 \div 7 = \boxed{}$

$36 \div 9 = \boxed{}$

$77 \div 11 = \boxed{}$

$14 \div 7 = \boxed{}$

$22 \div 2 = \boxed{}$

$3 \div 1 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain locked the gymnasium doors, then escaped in a team bus.
2. The villain stole the lucky game ball, then dashed past the concession stand.
3. The villain swiped the championship trophy, then ran out to the parking lot.
4. The villain took the team mascot costume, then zoomed off on a scooter.
5. The villain hid the team playbook, then ran out to the parking lot.
6. The villain locked the gymnasium doors, then bounced away down the street.
7. The villain stole the lucky game ball, then escaped in a team bus.
8. The villain stole the lucky game ball, then bounced away down the street.
9. The villain swiped the championship trophy, then dashed past the concession stand.
10. The villain swiped the championship trophy, then bounced away down the street.
11. The villain stole the lucky game ball, then ran out to the parking lot.
12. The villain locked the gymnasium doors, then ran out to the parking lot.

Answer Key

The Golden Whistle Mystery

Culprit: Dribbling Danny

Sky-High Dunk · Silver Wristband · Left-Handed Shooter · Bright Orange Headband · Loud Squeaky Toys

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT WEAR GOLD HIGH TOPS"

What is the value of the 8 in 5,896? = 800 (T) · What is the value of the 5 in 9,578? = 500 (V) · What is the value of the 9 in 1,496? = 90 (W) · What is the value of the 1 in 103? = 100 (P) · What is the value of the 8 in 6,683? = 80 (H) · What is the value of the 3 in 7,391? = 300 (N) · What is the value of the 4 in 4,232? = 4000 (G) · What is the value of the 5 in 5,366? = 5000 (S) · What is the value of the 1 in 51,543? = 1000 (E) · What is the value of the 8 in 98,430? = 8000 (O) · What is the value of the 7 in 67,234? = 7000 (D) · What is the value of the 1 in 4,210? = 10 (L) · What is the value of the 6 in 4,600? = 600 (R) · What is the value of the 2 in 2,618? = 2000 (I) · What is the value of the 9 in 89,218? = 9000 (A)

Clue 2 (Multiplication facts (1-12)): "THE MATCH BALL WAS THROWN BY A LEFT HANDER"

$6 \times 5 = 30$ (T) · $5 \times 11 = 55$ (C) · $11 \times 6 = 66$ (A) · $9 \times 12 = 108$ (D) · $3 \times 4 = 12$ (N) · $4 \times 9 = 36$ (R) · $9 \times 6 = 54$ (S) · $4 \times 2 = 8$ (B) · $7 \times 8 = 56$ (Y) · $8 \times 2 = 16$ (M) · $10 \times 9 = 90$ (F) · $3 \times 5 = 15$ (O) · $10 \times 12 = 120$ (L) · $3 \times 9 = 27$ (W) · $10 \times 7 = 70$ (E) · $1 \times 1 = 1$ (H)

Clue 3 (Subtraction): "THE SQUEAKY TOY SOUND BLOCKED THEIR SHOT"

$8819 - 2071 = 6748$ (T) · $8810 - 365 = 8445$ (A) · $10092 - 2973 = 7119$ (N) · $3493 - 281 = 3212$ (L) · $5776 - 336 = 5440$ (U) · $7079 - 1296 = 5783$ (I) · $5566 - 1325 = 4241$ (D) · $8569 - 4282 = 4287$ (H) · $2409 - 733 = 1676$ (Y) · $12643 - 4151 = 8492$ (S) · $10566 - 4214 = 6352$ (Q) · $3618 - 579 = 3039$ (C) · $9723 - 4757 = 4966$ (O) · $4774 - 2805 = 1969$ (E) · $8487 - 1748 = 6739$ (B) · $8962 - 1143 = 7819$ (K) · $11918 - 2967 = 8951$ (R)

Clue 4 (Addition): "AN ORANGE THREAD WAS CAUGHT ON THE HOOP"

$1061 + 1230 = 2291$ (A) · $1605 + 1043 = 2648$ (C) · $3074 + 1772 = 4846$ (R) · $3680 + 4089 = 7769$ (D) · $2745 + 4141 = 6886$ (U) · $1165 + 1705 = 2870$ (E) · $4718 + 4110 = 8828$ (P) · $1058 + 2159 = 3217$ (O) · $1149 + 1429 = 2578$ (S) · $2903 + 3681 = 6584$ (H) · $3234 + 4100 = 7334$ (W) · $3701 + 5169 = 8870$ (G) · $3225 + 5487 = 8712$ (N) · $4499 + 4944 = 9443$ (T)

Clue 5 (Division facts (1-12)): surviving statement is box 9 → Dribbling Danny

$25 \div 5 = 5$ · $36 \div 6 = 6$ · $8 \div 1 = 8$ · $2 \div 2 = 1$ · $100 \div 10 = 10$ · $84 \div 7 = 12$ · $36 \div 9 = 4$ · $77 \div 11 = 7$ · $14 \div 7 = 2$ · $22 \div 2 = 11$ · $3 \div 1 = 3$