



The Case of the Golden Cleat

Grade 6 math · Rounding, Place value, Percentages, Exponents, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

Just hours before the grand final, someone sneaked onto the pitch and snatched the legendary Golden Cleat! The turf is scuffed, and mysterious glowing tracks lead directly to the team locker rooms. We need to crack the math clues to find out which star player went rogue before the referee blows the starting whistle!

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 cleat snatcher 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	SUPER GEAR	DOMINANT FOOT	HEADBAND STYLE	TACTICAL WEAKNESS
Harry	gravity chip	sticky goalie gloves	right footed	neon green band	muddy penalty boxes
Karim	gravity chip	turbo shin guards	right footed	bright orange band	frequent water breaks
Sonny	tornado kick	turbo shin guards	right footed	jet black band	loud referee whistles
Kylian	rocket volley	spring loaded cleats	right footed	jet black band	loud referee whistles
Kevin	phantom dribble	spring loaded cleats	right footed	neon green band	loud referee whistles
Luka	gravity chip	glowing visor	right footed	jet black band	muddy penalty boxes
Bukayo	gravity chip	windbreaker cape	right footed	jet black band	muddy penalty boxes
Cristiano	shadow save	glowing visor	left footed	neon green band	muddy penalty boxes
Alisson	rocket volley	sticky goalie gloves	right footed	jet black band	loud referee whistles
Antoine	gravity chip	turbo shin guards	left footed	jet black band	frequent water breaks
Erling	shadow save	sticky goalie gloves	left footed	neon green band	frequent water breaks
Eden	rocket volley	windbreaker cape	right footed	jet black band	loud referee whistles
Sadio	rocket volley	turbo shin guards	left footed	jet black band	loud referee whistles
Marcus	phantom dribble	turbo shin guards	left footed	bright orange band	frequent water breaks
Bruno	tornado kick	glowing visor	left footed	jet black band	loud referee whistles
Luis	rocket volley	turbo shin guards	left footed	neon green band	muddy penalty boxes
Virgil	phantom dribble	spring loaded cleats	left footed	bright orange band	loud referee whistles
Jack	shadow save	glowing visor	right footed	jet black band	frequent water breaks
Robert	shadow save	sticky goalie gloves	left footed	jet black band	frequent water breaks
Casemiro	rocket volley	glowing visor	right footed	jet black band	frequent water breaks
Lionel	gravity chip	windbreaker cape	right footed	jet black band	loud referee whistles

CLUE 1

The stadium speed radar tracked the thief escaping, but the dash panel only shows velocity rounded to the nearest ten.

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

[illegible]

Round 1,651 to the nearest hundred → **T**

Round 73 to the nearest ten $\rightarrow$ **A**

Round 1,251 to the nearest hundred → **V**

Round 229 to the nearest ten $\rightarrow$ **Y**

Round 129 to the nearest ten $\rightarrow$

Round 330 to the nearest hundred $\rightarrow$ **S**

Round 874 to the nearest hundred → **P**

Round 168 to the nearest ten $\rightarrow$ **H**

Round 481 to the nearest hundred → **C**

Round 1,100 to the nearest hundred $\rightarrow$ **R**

Round 9,136 to the nearest thousand → **W**

Round 48 to the nearest ten $\rightarrow$ **N**

Round 94 to the nearest ten $\rightarrow$ **L**

Round 114 to the nearest ten $\rightarrow$ **K**

Round 434 to the nearest ten → **G**

Round 658 to the nearest hundred → **U**

Round 288 to the nearest ten → **D**

Round 27 to the nearest ten $\rightarrow$

Round 370 to the nearest ten → **E**

Scratch space:

CLUE 2 Place value

Our equipment manager found a secret code scratched underneath the digit plates on the locker room tactical board.

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

T			T					T					T				
2000	9000	400	2000	50	90	30	400	2000	100	50	3000	3000	2000	90	7000	500	900
							T				T						T
10	800	50	90	70	30	9000	2000	80	60	60	2000	400	20	3000	9000	60	2000

What is the value of the 2 in 812,919? →

T

What is the value of the 9 in 78,930? →

K

What is the value of the 7 in 44,475? →

I

What is the value of the 2 in 85,427? →

D

What is the value of the 4 in 91,498? →

E

What is the value of the 7 in 607,460? →

U

What is the value of the 9 in 19,473? →

H

What is the value of the 5 in 186,752? →

A

What is the value of the 3 in 63,907? →

S

What is the value of the 5 in 321,593? →

C

What is the value of the 3 in 54,638? →

G

What is the value of the 6 in 238,362? →

O

What is the value of the 9 in 370,297? →

R

What is the value of the 1 in 874,314? →

B

What is the value of the 1 in 54,157? →

W

What is the value of the 8 in 73,810? →

Y

What is the value of the 8 in 34,081? →

F

Scratch space:

CLUE 3 Percentages

We booted up the practice computer to calculate the percentage of shots each suspect missed during warmups.

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

T																		T
22	36	39	14	34	35	20	41	39	4	1	41	42	14	39	19	35	22	

										T				
20	34	5	43	1	39	30	45	36	41	19	22	20	39	19

50% of 44 = → T	5% of 80 = → C	20% of 170 = → O
5% of 720 = → H	60% of 70 = → N	20% of 175 = → A
25% of 172 = → D	40% of 35 = → G	25% of 4 = → R
75% of 52 = → E	75% of 60 = → W	40% of 75 = → F
5% of 820 = → I	20% of 95 = → S	25% of 20 = → U
40% of 50 = → L		

Scratch space:

CLUE 4 Exponents

The arena lighting grids blink in a sequence based on powers of ten to reveal a hidden security log.

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

A																			
343	27	324	81	144	400	125	125	125	49	128	81	81	400	8	343	32	400	81	
		A				A													
64	243	343	361	225	64	343	144	8											

$7^3 = \square \rightarrow$ A	$7^2 = \square \rightarrow$ P	$5^3 = \square \rightarrow$ S	$15^2 = \square \rightarrow$ K
$19^2 = \square \rightarrow$ C	$12^2 = \square \rightarrow$ N	$18^2 = \square \rightarrow$ I	$2^3 = \square \rightarrow$ D
$3^4 = \square \rightarrow$ T	$8^2 = \square \rightarrow$ B	$2^5 = \square \rightarrow$ J	$2^7 = \square \rightarrow$ O
$20^2 = \square \rightarrow$ E	$3^5 = \square \rightarrow$ L	$3^3 = \square \rightarrow$ W	

Scratch space:

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

To open the equipment vault, we have to divide the team training cones equally among the three practice squads.

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:

$20 \div 10 = \boxed{}$

$77 \div 11 = \boxed{}$

$22 \div 2 = \boxed{}$

$60 \div 10 = \boxed{}$

$45 \div 5 = \boxed{}$

$96 \div 8 = \boxed{}$

$110 \div 11 = \boxed{}$

$64 \div 8 = \boxed{}$

$32 \div 8 = \boxed{}$

$15 \div 5 = \boxed{}$

$60 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain performs a gravity defying bicycle kick, then escapes in a gust of synthetic wind.
2. The villain makes an impossible diving save, then escapes in a gust of synthetic wind.
3. The villain scores from eighty yards out, then escapes in a gust of synthetic wind.
4. The villain performs a gravity defying bicycle kick, then speeds away into the player tunnel.
5. The villain dribbles past the entire defense team, then scrambles the scoreboard electronics.
6. The villain blasts a ball through the stadium wall, then jumps clean over the crossbar.
7. The villain blasts a ball through the stadium wall, then speeds away into the player tunnel.
8. The villain performs a gravity defying bicycle kick, then scrambles the scoreboard electronics.
9. The villain dribbles past the entire defense team, then jumps clean over the crossbar.
10. The villain makes an impossible diving save, then scrambles the scoreboard electronics.
11. The villain performs a gravity defying bicycle kick, then leaves neon streaks on the grass.
12. The villain blasts a ball through the stadium wall, then leaves neon streaks on the grass.

Answer Key

The Case of the Golden Cleat

Culprit: Eden

rocket volley · windbreaker cape · right footed · jet black band · loud referee whistles

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE SUSPECT DOES NOT WEAR STICKY GLOVES"

Round 1,651 to the nearest hundred = 1700 (T) · Round 73 to the nearest ten = 70 (A) · Round 1,251 to the nearest hundred = 1300 (V) · Round 229 to the nearest ten = 230 (Y) · Round 129 to the nearest ten = 130 (I) · Round 330 to the nearest hundred = 300 (S) · Round 874 to the nearest hundred = 900 (P) · Round 168 to the nearest ten = 170 (H) · Round 481 to the nearest hundred = 500 (C) · Round 1,100 to the nearest hundred = 1100 (R) · Round 9,136 to the nearest thousand = 9000 (W) · Round 48 to the nearest ten = 50 (N) · Round 94 to the nearest ten = 90 (L) · Round 114 to the nearest ten = 110 (K) · Round 434 to the nearest ten = 430 (G) · Round 658 to the nearest hundred = 700 (U) · Round 288 to the nearest ten = 290 (D) · Round 27 to the nearest ten = 30 (O) · Round 370 to the nearest ten = 370 (E)

Clue 2 (Place value): "THE TARGET WAS STRUCK BY A RIGHT FOOTED SHOT"

What is the value of the 2 in 812,919? = 2000 (T) · What is the value of the 9 in 78,930? = 900 (K) · What is the value of the 7 in 44,475? = 70 (I) · What is the value of the 2 in 85,427? = 20 (D) · What is the value of the 4 in 91,498? = 400 (E) · What is the value of the 7 in 607,460? = 7000 (U) · What is the value of the 9 in 19,473? = 9000 (H) · What is the value of the 5 in 186,752? = 50 (A) · What is the value of the 3 in 63,907? = 3000 (S) · What is the value of the 5 in 321,593? = 500 (C) · What is the value of the 3 in 54,638? = 30 (G) · What is the value of the 6 in 238,362? = 60 (O) · What is the value of the 9 in 370,297? = 90 (R) · What is the value of the 1 in 874,314? = 10 (B) · What is the value of the 1 in 54,157? = 100 (W) · What is the value of the 8 in 73,810? = 800 (Y) · What is the value of the 8 in 34,081? = 80 (F)

Clue 3 (Percentages): "THE GOALIE CRINGES AT LOUD REF WHISTLES"

50% of 44 = 22 (T) · 5% of 80 = 4 (C) · 20% of 170 = 34 (O) · 5% of 720 = 36 (H) · 60% of 70 = 42 (N) · 20% of 175 = 35 (A) · 25% of 172 = 43 (D) · 40% of 35 = 14 (G) · 25% of 4 = 1 (R) · 75% of 52 = 39 (E) · 75% of 60 = 45 (W) · 40% of 75 = 30 (F) · 5% of 820 = 41 (I) · 20% of 95 = 19 (S) · 25% of 20 = 5 (U) · 40% of 50 = 20 (L)

Clue 4 (Exponents): "A WITNESS SPOTTED A JET BLACK BAND"

$7^3 = 343$ (A) · $7^2 = 49$ (P) · $5^3 = 125$ (S) · $15^2 = 225$ (K) · $19^2 = 361$ (C) · $12^2 = 144$ (N) · $18^2 = 324$ (I) · $2^3 = 8$ (D) · $3^4 = 81$ (T) · $8^2 = 64$ (B) · $2^5 = 32$ (J) · $2^7 = 128$ (O) · $20^2 = 400$ (E) · $3^5 = 243$ (L) · $3^3 = 27$ (W)

Clue 5 (Division facts (1-12)): surviving statement is box 1 → Eden

$20 \div 10 = 2$ · $77 \div 11 = 7$ · $22 \div 2 = 11$ · $60 \div 10 = 6$ · $45 \div 5 = 9$ · $96 \div 8 = 12$ · $110 \div 11 = 10$ · $64 \div 8 = 8$ · $32 \div 8 = 4$ · $15 \div 5 = 3$ · $60 \div 12 = 5$