



The Championship Ball Mystery

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

Detective: _____ Date: _____

The golden championship ball has vanished from the trophy case right before the big kickoff! The Turf Phantom is hiding among the players. Help us track down the thief and save the tournament!

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 Turf Phantom 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	KICKING FOOT	HAIRSTYLE	MATCH THREAT
Robert Lewandowski	Power Shot	Radar Watch	Left Footed	Neon Dye	Loud Whistles
Neymar Jr	Speed Dribble	Shiny Medal	Right Footed	Neon Dye	Wet Turf
Alisson Becker	Curved Pass	Laser Cleats	Left Footed	Neon Dye	Wet Turf
Bruno Fernandes	Power Shot	Laser Cleats	Left Footed	Neon Dye	Loud Whistles
Alex Morgan	Power Shot	Laser Cleats	Right Footed	Neon Dye	Loud Whistles
Son Heungmin	Curved Pass	Laser Cleats	Right Footed	Mohawk	Loud Whistles
Lionel Messi	Super Header	Golden Whistle	Right Footed	Neon Dye	Yellow Cards
Mo Salah	Super Header	Sticky Gloves	Right Footed	Neon Dye	Wet Turf
Jude Bellingham	Power Shot	Shiny Medal	Left Footed	Neon Dye	Yellow Cards
Luis Diaz	Super Header	Golden Whistle	Right Footed	Neon Dye	Wet Turf
Jack Grealish	Super Header	Sticky Gloves	Left Footed	Neon Dye	Wet Turf
Sam Kerr	Wall Block	Golden Whistle	Right Footed	Neon Dye	Wet Turf
Marcus Rashford	Power Shot	Golden Whistle	Left Footed	Ponytail	Yellow Cards
Erling Haaland	Wall Block	Sticky Gloves	Left Footed	Ponytail	Yellow Cards
Kevin De Bruyne	Wall Block	Laser Cleats	Right Footed	Mohawk	Wet Turf
Kylian Mbappe	Wall Block	Shiny Medal	Left Footed	Mohawk	Yellow Cards
Bukayo Saka	Super Header	Radar Watch	Left Footed	Mohawk	Wet Turf
Harry Kane	Wall Block	Sticky Gloves	Right Footed	Neon Dye	Wet Turf
Christian Pulisic	Speed Dribble	Shiny Medal	Left Footed	Neon Dye	Loud Whistles
Megan Rapinoe	Super Header	Sticky Gloves	Left Footed	Ponytail	Loud Whistles
Luka Modric	Super Header	Shiny Medal	Right Footed	Mohawk	Loud Whistles

CLUE 1

Multiplication facts (1-12)

We count the rows of soccer balls sitting on the racks. If we multiply the rows by the balls in each row, we unlock the locker room camera feed.

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

N					N									
100	4	121	108	96	100	90	84	45	88	44	42	40	44	121
			N									N		
28	4	3	100	88	44	9	9	108	45	121	54	45	100	45

$10 \times 10 = \square \rightarrow \boxed{\text{N}}$

$3 \times 3 = \square \rightarrow \boxed{\text{T}}$

$12 \times 8 = \square \rightarrow \boxed{\text{I}}$

$12 \times 9 = \square \rightarrow \boxed{\text{H}}$

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

$9 \times 6 = \square \rightarrow \boxed{\text{C}}$

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

$7 \times 12 = \square \rightarrow \boxed{\text{M}}$

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

$8 \times 5 = \square \rightarrow \boxed{\text{W}}$

$11 \times 11 = \square \rightarrow \boxed{\text{S}}$

$5 \times 9 = \square \rightarrow \boxed{\text{E}}$

$4 \times 11 = \square \rightarrow \boxed{\text{A}}$

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

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

$4 \times 1 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

CLUE 2

The stadium scoreboard shows a secret code. We need to find the digit in the hundreds place to unlock the next clue about the thief.

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

Diagram illustrating a sequence of numbers and their corresponding 'true' (T) or 'false' (F) status:

Index	Number	Status
1	90	T
2	200	F
3	70	F
4	60	F
5	200	F
6	40	F
7	4000	F
8	90	T
9	7000	F
10	10	F
11	5000	F
12	30	F
13	700	F
14	5000	F
15	70	F
16	900	F
17	90	T
18	200	F
19	70	F
20	6000	F
21	40	F
22	20	F
23	20	F
24	2000	F
25	30	F
26	400	F
27	200	F
28	90	T

What is the value of the 9 in 295? → **T**

What is the value of the 6 in 165? → **P**

What is the value of the 3 in 8,734? →

What is the value of the 4 in 9,048? → **A**

What is the value of the 7 in 4,074? → **E**

What is the value of the 5 in 75,003? → **K**

What is the value of the 6 in 6,141? → **B**

What is the value of the 2 in 827? → **L**

What is the value of the 4 in 4,827? → **N**

What is the value of the 4 in 429? → **G**

What is the value of the 1 in 4,916? → **M**

What is the value of the 7 in 1,750? → **C**

What is the value of the 2 in 2,176? → **R**

What is the value of the 7 in 7,215? → ☐

What is the value of the 9 in 1,977? → **D**

What is the value of the 2 in 214? → **H**

Scratch space:

CLUE 3 Rounding

The player speed radar can only show speeds rounded to the nearest ten. Rounding the top speed gives us the code to open the stadium gate.

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

T								T									
4300	300	90	700	300	1100	430	4300	500	2900	7000	3000	290	700	7000	500	430	
		T	T														
200	90	4300	4300	230	130	3700											

Round 4,337 to the nearest hundred → **T**

Round 7,353 to the nearest thousand → **S**

Round 2,942 to the nearest thousand → **L**

Round 240 to the nearest hundred → **W**

Round 456 to the nearest hundred → **O**

Round 432 to the nearest ten → **N**

Round 653 to the nearest hundred → **P**

Round 2,870 to the nearest hundred → **M**

Round 1,102 to the nearest hundred → **A**

Round 287 to the nearest ten → **I**

Round 233 to the nearest ten → **U**

Round 88 to the nearest ten → **E**

Round 3,702 to the nearest hundred → **F**

Round 259 to the nearest hundred → **H**

Round 126 to the nearest ten → **R**

Scratch space:

CLUE 4 Addition

We tally up all the orange cones and blue jerseys left on the training field. Adding them together reveals where the phantom went next.

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

W																	
5973	9245	2670	9868	3188	5680	2409	5680	9245	9868	5680	8667	5806	9770	6893	2409	9314	9245

9868	5680	5806	7307	9245	6893	2716	9245	9314

$3503 + 2470 = \square \rightarrow \mathbf{W}$	$3549 + 2131 = \square \rightarrow \mathbf{N}$	$6766 + 3102 = \square \rightarrow \mathbf{O}$
$1368 + 1820 = \square \rightarrow \mathbf{U}$	$3651 + 3656 = \square \rightarrow \mathbf{J}$	$857 + 1859 = \square \rightarrow \mathbf{S}$
$3158 + 6087 = \square \rightarrow \mathbf{E}$	$3645 + 5669 = \square \rightarrow \mathbf{Y}$	$3187 + 5480 = \square \rightarrow \mathbf{H}$
$1368 + 1041 = \square \rightarrow \mathbf{D}$	$4474 + 5296 = \square \rightarrow \mathbf{I}$	$3142 + 3751 = \square \rightarrow \mathbf{R}$
$2116 + 3690 = \square \rightarrow \mathbf{A}$	$1253 + 1417 = \square \rightarrow \mathbf{F}$	

Scratch space:

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

The referee needs to share the practice balls equally among the teams. Dividing the balls gives us the final secret code.

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:

$84 \div 7 = \boxed{}$

$36 \div 4 = \boxed{}$

$9 \div 9 = \boxed{}$

$70 \div 7 = \boxed{}$

$36 \div 9 = \boxed{}$

$40 \div 8 = \boxed{}$

$36 \div 6 = \boxed{}$

$6 \div 2 = \boxed{}$

$70 \div 10 = \boxed{}$

$99 \div 9 = \boxed{}$

$18 \div 9 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain leaped high with a super header to reach the trophy, then grabbed the loot with sticky gloves.
2. The villain leaped high with a super header to reach the trophy, then checked the escape route on a radar watch.
3. The villain leaped high with a super header to reach the trophy, then ran away wearing glowing laser cleats.
4. The villain dribbled past the security guards at top speed, then checked the escape route on a radar watch.
5. The villain dribbled past the security guards at top speed, then grabbed the loot with sticky gloves.
6. The villain kicked a power shot through the locker room door, then blew a sharp blast on a golden whistle.
7. The villain curved a spectacular pass over the stadium wall, then checked the escape route on a radar watch.
8. The villain blocked the exit with a massive wall block, then blew a sharp blast on a golden whistle.
9. The villain leaped high with a super header to reach the trophy, then blew a sharp blast on a golden whistle.
10. The villain kicked a power shot through the locker room door, then grabbed the loot with sticky gloves.
11. The villain leaped high with a super header to reach the trophy, then tossed a fake shiny medal to confuse us.
12. The villain blocked the exit with a massive wall block, then grabbed the loot with sticky gloves.

Answer Key

The Championship Ball Mystery

Culprit: Sam Kerr

Wall Block · Golden Whistle · Right Footed · Neon Dye · Wet Turf

Trail: Start 21 → Clue 1 16 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "NO SHINY MEDAL WAS FOUND AT THE SCENE"

$10 \times 10 = 100$ (N) · $3 \times 3 = 9$ (T) · $12 \times 8 = 96$ (I) · $12 \times 9 = 108$ (H) · $4 \times 7 = 28$ (F) · $9 \times 6 = 54$ (C) · $11 \times 8 = 88$ (D) · $7 \times 12 = 84$ (M) · $3 \times 1 = 3$ (U) · $8 \times 5 = 40$ (W) · $11 \times 11 = 121$ (S) · $5 \times 9 = 45$ (E) · $4 \times 11 = 44$ (A) · $6 \times 7 = 42$ (L) · $10 \times 9 = 90$ (Y) · $4 \times 1 = 4$ (O)

Clue 2 (Place value): "THE PHANTOM KICKED THE BALL RIGHT"

What is the value of the 9 in 295? = 90 (T) · What is the value of the 6 in 165? = 60 (P) · What is the value of the 3 in 8,734? = 30 (I) · What is the value of the 4 in 9,048? = 40 (A) · What is the value of the 7 in 4,074? = 70 (E) · What is the value of the 5 in 75,003? = 5000 (K) · What is the value of the 6 in 6,141? = 6000 (B) · What is the value of the 2 in 827? = 20 (L) · What is the value of the 4 in 4,827? = 4000 (N) · What is the value of the 4 in 429? = 400 (G) · What is the value of the 1 in 4,916? = 10 (M) · What is the value of the 7 in 1,750? = 700 (C) · What is the value of the 2 in 2,176? = 2000 (R) · What is the value of the 7 in 7,215? = 7000 (O) · What is the value of the 9 in 1,977? = 900 (D) · What is the value of the 2 in 214? = 200 (H)

Clue 3 (Rounding): "THE PHANTOM SLIPS ON WET TURF"

Round 4,337 to the nearest hundred = 4300 (T) · Round 7,353 to the nearest thousand = 7000 (S) · Round 2,942 to the nearest thousand = 3000 (L) · Round 240 to the nearest hundred = 200 (W) · Round 456 to the nearest hundred = 500 (O) · Round 432 to the nearest ten = 430 (N) · Round 653 to the nearest hundred = 700 (P) · Round 2,870 to the nearest hundred = 2900 (M) · Round 1,102 to the nearest hundred = 1100 (A) · Round 287 to the nearest ten = 290 (I) · Round 233 to the nearest ten = 230 (U) · Round 88 to the nearest ten = 90 (E) · Round 3,702 to the nearest hundred = 3700 (F) · Round 259 to the nearest hundred = 300 (H) · Round 126 to the nearest ten = 130 (R)

Clue 4 (Addition): "WE FOUND NEON HAIR DYE ON A JERSEY"

$3503 + 2470 = 5973$ (W) · $3549 + 2131 = 5680$ (N) · $6766 + 3102 = 9868$ (O) · $1368 + 1820 = 3188$ (U) · $3651 + 3656 = 7307$ (J) · $857 + 1859 = 2716$ (S) · $3158 + 6087 = 9245$ (E) · $3645 + 5669 = 9314$ (Y) · $3187 + 5480 = 8667$ (H) · $1368 + 1041 = 2409$ (D) · $4474 + 5296 = 9770$ (I) · $3142 + 3751 = 6893$ (R) · $2116 + 3690 = 5806$ (A) · $1253 + 1417 = 2670$ (F)

Clue 5 (Division facts (1-12)): surviving statement is box 8 → Sam Kerr

$84 \div 7 = 12$ · $36 \div 4 = 9$ · $9 \div 9 = 1$ · $70 \div 7 = 10$ · $36 \div 9 = 4$ · $40 \div 8 = 5$ · $36 \div 6 = 6$ · $6 \div 2 = 3$ · $70 \div 10 = 7$ · $99 \div 9 = 11$ · $18 \div 9 = 2$