



The Case of the Vanished Cup

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

Detective: _____ **Date:** _____

At halftime, the golden championship cup sat shining on its stand. When the whistle blew for the second half, both the cup and team captain Maya were gone. You are the ball kid who saw it all, and now it is up to you to track down the Pitch Phantom.

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 Pitch 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	SPECIAL SKILL	PLAYER TYPE	CLEAT COLOR	WEAKNESS
Felix	fast dribble	rainbow flick	girl	yellow cleats	muddy fields
Mila	sliding tackle	long throw in	boy	red cleats	loud whistles
Leo	bicycle kick	no look pass	girl	blue cleats	muddy fields
Cleo	curving free kick	no look pass	boy	yellow cleats	loud whistles
Bruno	curving free kick	diving save	girl	yellow cleats	muddy fields
Zoe	bicycle kick	speed sprint	boy	red cleats	bright lights
Sofia	bicycle kick	long throw in	girl	red cleats	muddy fields
Maya	bicycle kick	rainbow flick	boy	red cleats	loud whistles
Lola	powerful header	speed sprint	girl	red cleats	muddy fields
Kira	fast dribble	long throw in	girl	yellow cleats	muddy fields
Ruby	fast dribble	speed sprint	girl	blue cleats	bright lights
Jonas	powerful header	rainbow flick	girl	yellow cleats	loud whistles
Omar	fast dribble	rainbow flick	girl	yellow cleats	bright lights
Hugo	curving free kick	speed sprint	girl	yellow cleats	muddy fields
Ana	curving free kick	long throw in	girl	yellow cleats	loud whistles
Marco	sliding tackle	speed sprint	boy	yellow cleats	bright lights
Sam	fast dribble	speed sprint	girl	yellow cleats	muddy fields
Andre	curving free kick	diving save	boy	red cleats	bright lights
Priya	powerful header	rainbow flick	boy	yellow cleats	loud whistles
Tess	bicycle kick	rainbow flick	boy	yellow cleats	muddy fields
Nina	fast dribble	no look pass	girl	red cleats	loud whistles

CLUE 1

The stadium scoreboard only shows numbers rounded to the nearest ten, so you must round the clues to read what the screen flashed about the thief's skills.

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

A number line from 0 to 10,000. The line is marked with the following numbers in boxes: 4000, 500, 7000, 900, 2000, 8000, 8000, 6000, 2000, 600, 90, 6000, 600, 600, 60, 4000, 70, 6000, 400, 7000. The number 4000 is highlighted in orange and labeled 'T'.

Round 4,042 to the nearest thousand $\rightarrow$ **T**

Round 379 to the nearest hundred $\rightarrow$ **K**

Round 61 to the nearest ten $\rightarrow$

Round 3,485 to the nearest thousand → **S**

Round 4,554 to the nearest thousand → **D**

Round 89 to the nearest ten $\rightarrow$ **C**

Round 74 to the nearest ten → **M**

Round 8,723 to the nearest thousand → **G**

Round 8,334 to the nearest thousand $\rightarrow$ **L**

Round 5,872 to the nearest thousand → **A**

Round 2,243 to the nearest thousand $\rightarrow$

Round 522 to the nearest hundred $\rightarrow$ **H**

Round 6,993 to the nearest thousand → **E**

Round 911 to the nearest hundred $\rightarrow$ **V**

Round 569 to the nearest hundred → **N**

Scratch space:

CLUE 2 Addition

You hurry to the equipment room and count up the gear left behind, adding the piles together to learn if the thief was a boy or a girl.

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

A																			
969	689	966	813	856	766	969	977	399	747	766	318	644	644	352	399	747			

977	318	548	548	747	813	644	966	747	856	766

$423 + 546 = \boxed{} \rightarrow \boxed{\text{A}}$

$392 + 574 = \boxed{} \rightarrow \boxed{\text{I}}$

$127 + 272 = \boxed{} \rightarrow \boxed{\text{H}}$

$95 + 223 = \boxed{} \rightarrow \boxed{\text{O}}$

$345 + 299 = \boxed{} \rightarrow \boxed{\text{F}}$

$413 + 443 = \boxed{} \rightarrow \boxed{\text{L}}$

$148 + 204 = \boxed{} \rightarrow \boxed{\text{T}}$

$304 + 443 = \boxed{} \rightarrow \boxed{\text{E}}$

$424 + 342 = \boxed{} \rightarrow \boxed{\text{D}}$

$248 + 441 = \boxed{} \rightarrow \boxed{\text{G}}$

$514 + 463 = \boxed{} \rightarrow \boxed{\text{S}}$

$255 + 293 = \boxed{} \rightarrow \boxed{\text{C}}$

$437 + 376 = \boxed{} \rightarrow \boxed{\text{R}}$

Scratch space:

CLUE 3 Subtraction

A trail of dropped jersey numbers leads away from the field, and you subtract to figure out how the players fought the thief off.

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

G																		
892	315	354	878	262	280	280	637	160	354	280	678	645	262	639	315	262	161	563
280	160	563	712	161	678	645	161	678	581	645	523							

$940 - 48 = \square \rightarrow \mathbf{G}$	$1005 - 293 = \square \rightarrow \mathbf{W}$	$179 - 18 = \square \rightarrow \mathbf{T}$
$557 - 397 = \square \rightarrow \mathbf{L}$	$703 - 140 = \square \rightarrow \mathbf{O}$	$934 - 56 = \square \rightarrow \mathbf{R}$
$800 - 277 = \square \rightarrow \mathbf{F}$	$784 - 139 = \square \rightarrow \mathbf{E}$	$1036 - 397 = \square \rightarrow \mathbf{M}$
$394 - 132 = \square \rightarrow \mathbf{D}$	$930 - 349 = \square \rightarrow \mathbf{I}$	$884 - 247 = \square \rightarrow \mathbf{P}$
$756 - 78 = \square \rightarrow \mathbf{H}$	$364 - 10 = \square \rightarrow \mathbf{A}$	$332 - 17 = \square \rightarrow \mathbf{U}$
$306 - 26 = \square \rightarrow \mathbf{S}$		

Scratch space:

CLUE 4

Outside the locker rooms, muddy cleat prints sit in neat rows, so you multiply the rows to match the color of the thief's cleats.

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

33 90 10 10 20 50 40 10 90 3 45 30 2 5 6 45 8 10 90 27

72 2 20 18 45 1 90 16 20 3 10

$$3 \times 11 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$4 \times 4 = \square \rightarrow \mathbf{G}$

$10 \times 4 = \boxed{} \rightarrow \boxed{\text{C}}$

$10 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{W}}$

$9 \times 3 = \square \rightarrow \mathbf{D}$

$$2 \times 10 = \boxed{} \rightarrow \boxed{0}$$

$1 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{R}}$

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

$1 \times 5 = \boxed{} \rightarrow \boxed{1}$

$3 \times 1 = \boxed{} \rightarrow \mathbf{A}$

$1 \times 6 = \boxed{} \rightarrow \boxed{\mathbf{N}}$

$9 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{F}}$

$9 \times 5 = \boxed{} \rightarrow \boxed{\text{T}}$

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

$$10 \times 1 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$10 \times 3 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$8 \times 1 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$6 \times 3 = \boxed{} \rightarrow \boxed{\mathbf{M}}$$

Scratch space:

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

Back in the trophy hall, you share the last clues evenly among your teammates, dividing them up to finally name the Pitch Phantom.

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:

$132 \div 12 = \boxed{}$

$36 \div 12 = \boxed{}$

$49 \div 7 = \boxed{}$

$12 \div 2 = \boxed{}$

$18 \div 9 = \boxed{}$

$72 \div 9 = \boxed{}$

$18 \div 2 = \boxed{}$

$4 \div 4 = \boxed{}$

$32 \div 8 = \boxed{}$

$25 \div 5 = \boxed{}$

$60 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain sweeps in with a sliding tackle, then makes a diving save.
2. The villain smashes a powerful header, then blasts off in a speed sprint.
3. The villain races past with a fast dribble, then spins a rainbow flick.
4. The villain smashes a powerful header, then hurls a long throw in.
5. The villain bends a curving free kick, then spins a rainbow flick.
6. The villain bends a curving free kick, then makes a diving save.
7. The villain races past with a fast dribble, then blasts off in a speed sprint.
8. The villain leaps into a bicycle kick, then slips a no look pass.
9. The villain sweeps in with a sliding tackle, then hurls a long throw in.
10. The villain races past with a fast dribble, then hurls a long throw in.
11. The villain bends a curving free kick, then blasts off in a speed sprint.
12. The villain sweeps in with a sliding tackle, then spins a rainbow flick.

Answer Key

The Case of the Vanished Cup

Culprit: Kira

fast dribble · long throw in · girl · yellow cleats · muddy fields

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN CANNOT MAKE A DIVING SAVE"

Round 4,042 to the nearest thousand = 4000 (T) · Round 379 to the nearest hundred = 400 (K) · Round 61 to the nearest ten = 60 (O) · Round 3,485 to the nearest thousand = 3000 (S) · Round 4,554 to the nearest thousand = 5000 (D) · Round 89 to the nearest ten = 90 (C) · Round 74 to the nearest ten = 70 (M) · Round 8,723 to the nearest thousand = 9000 (G) · Round 8,334 to the nearest thousand = 8000 (L) · Round 5,872 to the nearest thousand = 6000 (A) · Round 2,243 to the nearest thousand = 2000 (I) · Round 522 to the nearest hundred = 500 (H) · Round 6,993 to the nearest thousand = 7000 (E) · Round 911 to the nearest hundred = 900 (V) · Round 569 to the nearest hundred = 600 (N)

Clue 2 (Addition): "A GIRL DASHED OFF THE SOCCER FIELD"

$423 + 546 = 969$ (A) · $392 + 574 = 966$ (I) · $127 + 272 = 399$ (H) · $95 + 223 = 318$ (O) · $345 + 299 = 644$ (F) · $413 + 443 = 856$ (L) · $148 + 204 = 352$ (T) · $304 + 443 = 747$ (E) · $424 + 342 = 766$ (D) · $248 + 441 = 689$ (G) · $514 + 463 = 977$ (S) · $255 + 293 = 548$ (C) · $437 + 376 = 813$ (R)

Clue 3 (Subtraction): "GUARDS SPLASHED MUD TO SLOW THE THIEF"

$940 - 48 = 892$ (G) · $1005 - 293 = 712$ (W) · $179 - 18 = 161$ (T) · $557 - 397 = 160$ (L) · $703 - 140 = 563$ (O) · $934 - 56 = 878$ (R) · $800 - 277 = 523$ (F) · $784 - 139 = 645$ (E) · $1036 - 397 = 639$ (M) · $394 - 132 = 262$ (D) · $930 - 349 = 581$ (I) · $884 - 247 = 637$ (P) · $756 - 78 = 678$ (H) · $364 - 10 = 354$ (A) · $332 - 17 = 315$ (U) · $306 - 26 = 280$ (S)

Clue 4 (Multiplication facts (1-12)): "YELLOW CLEAT PRINTS LED FROM THE GOAL"

$3 \times 11 = 33$ (Y) · $4 \times 4 = 16$ (G) · $10 \times 4 = 40$ (C) · $10 \times 5 = 50$ (W) · $9 \times 3 = 27$ (D) · $2 \times 10 = 20$ (O) · $1 \times 2 = 2$ (R) · $10 \times 9 = 90$ (E) · $1 \times 5 = 5$ (I) · $3 \times 1 = 3$ (A) · $1 \times 6 = 6$ (N) · $9 \times 8 = 72$ (F) · $9 \times 5 = 45$ (T) · $1 \times 1 = 1$ (H) · $10 \times 1 = 10$ (L) · $10 \times 3 = 30$ (P) · $8 \times 1 = 8$ (S) · $6 \times 3 = 18$ (M)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Kira

$132 \div 12 = 11$ · $36 \div 12 = 3$ · $49 \div 7 = 7$ · $12 \div 2 = 6$ · $18 \div 9 = 2$ · $72 \div 9 = 8$ · $18 \div 2 = 9$ · $4 \div 4 = 1$ · $32 \div 8 = 4$ · $25 \div 5 = 5$ · $60 \div 5 = 12$