



The Case of the Stadium Saboteur

Grade 7 math · Integers, Percentages, Order of operations, Exponents, Two-step equations · Reading level grades 7-9

Detective: _____ Date: _____

Moments before the championship final at Apex International Soccer Stadium, someone locked the head referee in the locker room and swapped the official game balls with heavy fakes! Detective, analyze the clues left behind on the pitch to unmask 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 match saboteur is _____

Possible suspects

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

NAME	SPECIAL MOVE	PRO GEAR	DOMINANT FOOT	HAIRSTYLE	PITCH DISTRACTION
Alex Morgan	Bicycle Kick	Smart Cleats	Left-Footed	Curly Fade	Wet Pitch
Erling Haaland	Curved Corner	Smart Cleats	Left-Footed	Curly Fade	Loud Vuvuzelas
Bruno Fernandes	Curved Corner	Tinted Visor	Left-Footed	Curly Fade	Wet Pitch
Jamal Musiala	Diving Header	Weighted Vest	Right-Footed	Curly Fade	Wet Pitch
Marcus Rashford	Power Free Kick	Tinted Visor	Right-Footed	Braided Ponytail	Loud Vuvuzelas
Sam Kerr	Bicycle Kick	Carbon Shin Guards	Left-Footed	Curly Fade	Loud Vuvuzelas
Son Heung-min	Diving Header	Smart Cleats	Right-Footed	Braided Ponytail	Blinding Floodlights
Cristiano Ronaldo	Diving Header	Smart Cleats	Left-Footed	Curly Fade	Loud Vuvuzelas
Aitana Bonmati	Speed Dribble	Grip Socks	Left-Footed	Curly Fade	Wet Pitch
Harry Kane	Curved Corner	Smart Cleats	Right-Footed	Spiky Mohawk	Blinding Floodlights
Mohamed Salah	Power Free Kick	Grip Socks	Left-Footed	Curly Fade	Wet Pitch
Pedri Lopez	Curved Corner	Smart Cleats	Right-Footed	Curly Fade	Loud Vuvuzelas
Kevin De Bruyne	Curved Corner	Smart Cleats	Left-Footed	Curly Fade	Wet Pitch
Declan Rice	Diving Header	Tinted Visor	Left-Footed	Braided Ponytail	Loud Vuvuzelas
Bukayo Saka	Speed Dribble	Tinted Visor	Right-Footed	Braided Ponytail	Wet Pitch
Neymar Jr	Bicycle Kick	Tinted Visor	Right-Footed	Curly Fade	Blinding Floodlights
Virgil van Dijk	Diving Header	Carbon Shin Guards	Left-Footed	Spiky Mohawk	Wet Pitch
Robert Lewandowski	Curved Corner	Weighted Vest	Right-Footed	Spiky Mohawk	Wet Pitch
Lionel Messi	Speed Dribble	Carbon Shin Guards	Left-Footed	Braided Ponytail	Wet Pitch
Luka Modric	Diving Header	Smart Cleats	Left-Footed	Spiky Mohawk	Loud Vuvuzelas
Vinicius Jr	Bicycle Kick	Smart Cleats	Right-Footed	Spiky Mohawk	Wet Pitch

CLUE 1 Integers

The referee checked the yardage log where penalties and gains created positive and negative integers.

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

T								T										T
4	11	18	2	20	21	24	4	18	3	14	26	24	18	2	22	24	4	

				T			T									
19	18	20	14	4	13	22	4	18	26	9	13	2	24	14	2	

$$(-8) + 12 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$7 - (-7) = \boxed{} \rightarrow \boxed{\text{R}}$$

$$(-14) + 36 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$(-6) + 17 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$(-9) + 30 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$(-7) + 31 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$(-6) + 8 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$(-9) + 12 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$(-2) + 22 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$11 - (-8) = \boxed{} \rightarrow \boxed{\text{W}}$$

$$24 - (-2) = \boxed{} \rightarrow \boxed{\text{D}}$$

$$8 - (-10) = \boxed{} \rightarrow \boxed{\text{E}}$$

$$(-9) + 22 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$(-14) + 23 = \boxed{} \rightarrow \boxed{\text{V}}$$

Scratch space:

CLUE 2

Stadium telemetry tracked the team's passing accuracy percentages across the entire first half.

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

Diagram illustrating the sequence of numbers and 'T' markers across two rows:

Row 1: 16 (T), 9, 6, 43, 30, 6, 13, 59, 17, 43, 16 (T), 28, 15, 59, 6, 28, 50, 13, 43

Row 2: 57, 6, 27, 16 (T), 27, 53, 53, 16 (T), 6, 34

5% of 320 = → ☐ T

5% of 120 = → **E**

25% of 236 = → **K**

50% of 68 = → **D**

10% of 170 = → **Y**

75% of 40 = → **N**

25% of 108 = → **F**

20% of 65 = → **A**

5% of 860 = → **S**

75% of 76 = $\rightarrow$ **L**

50% of 106 = → ☐

60% of 15 = → **H**

40% of 125 = → **W**

10% of 150 = →

20% of 140 = → **R**

Scratch space:

CLUE 3
Order of operations

The tactical board displayed a multi-step conditioning score that required proper order of operations.

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

A																		
62	82	118	83	73	70	83	85	95	26	83	102	73	73	118	111	83	95	118
			A															
26	64	118	62	60	110	91	86	64	64	118	91							

$41 + 7 \times 3 = \square \rightarrow \text{A}$

$9 \times 10 - 20 = \square \rightarrow \text{I}$

$8 \times 12 - 13 = \square \rightarrow \text{T}$

$12 \times 11 - 22 = \square \rightarrow \text{Y}$

$11 \times 8 - 3 = \square \rightarrow \text{C}$

$10 \times 12 - 9 = \square \rightarrow \text{D}$

$9 \times 12 - 22 = \square \rightarrow \text{U}$

$70 + 7 \times 3 = \square \rightarrow \text{R}$

$12 \times 11 - 14 = \square \rightarrow \text{E}$

$52 + 3 \times 7 = \square \rightarrow \text{P}$

$77 + 5 \times 5 = \square \rightarrow \text{O}$

$61 + 3 \times 7 = \square \rightarrow \text{W}$

$6 \times 8 - 22 = \square \rightarrow \text{S}$

$9 \times 8 - 12 = \square \rightarrow \text{K}$

$12 \times 8 - 1 = \square \rightarrow \text{H}$

$7 \times 10 - 6 = \square \rightarrow \text{N}$

Scratch space:

CLUE 4 Exponents

The stadium's power grid analyzed drill intensity using exponential growth patterns.

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

T													T			
9	343	81	32	400	225	81	121	400	4	100	100	9	400	27	81	

49	343	100	256	49	400	32	216	121	25	16	4	400	128	81	

$3^2 = \square \rightarrow$ T	$7^3 = \square \rightarrow$ H	$6^3 = \square \rightarrow$ U	$2^2 = \square \rightarrow$ F
$20^2 = \square \rightarrow$ A	$2^7 = \square \rightarrow$ D	$11^2 = \square \rightarrow$ R	$3^3 = \square \rightarrow$ G
$5^2 = \square \rightarrow$ L	$16^2 = \square \rightarrow$ W	$10^2 = \square \rightarrow$ O	$7^2 = \square \rightarrow$ S
$3^4 = \square \rightarrow$ E	$2^5 = \square \rightarrow$ C	$2^4 = \square \rightarrow$ Y	$15^2 = \square \rightarrow$ M

Scratch space:

CLUE 5**Two-step equations - the last clue**

The head analyst set up a two-step equation to figure out the exact training points remaining.

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:

$5x + 9 = 34, x = \boxed{}$

$5x + 8 = 58, x = \boxed{}$

$3x + 5 = 11, x = \boxed{}$

$5x + 8 = 28, x = \boxed{}$

$4x + 8 = 44, x = \boxed{}$

$4x + 2 = 34, x = \boxed{}$

$4x + 6 = 10, x = \boxed{}$

$4x + 4 = 48, x = \boxed{}$

$2x + 10 = 34, x = \boxed{}$

$3x + 2 = 23, x = \boxed{}$

$6x + 9 = 27, x = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain curled an unstoppable free kick into the net, then laced up high tech smart cleats.
2. The villain curled an unstoppable free kick into the net, then pulled up neon grip socks.
3. The villain curled a corner kick past the defense, then snapped on carbon shin guards.
4. The villain blazed past defenders with a speed dribble, then adjusted a tinted visor.
5. The villain blazed past defenders with a speed dribble, then pulled up neon grip socks.
6. The villain curled a corner kick past the defense, then laced up high tech smart cleats.
7. The villain snapped a diving header into the top corner, then strapped on a weighted vest.
8. The villain executed a spectacular bicycle kick, then pulled up neon grip socks.
9. The villain curled a corner kick past the defense, then pulled up neon grip socks.
10. The villain executed a spectacular bicycle kick, then laced up high tech smart cleats.
11. The villain blazed past defenders with a speed dribble, then laced up high tech smart cleats.
12. The villain blazed past defenders with a speed dribble, then snapped on carbon shin guards.

Answer Key

The Case of the Stadium Saboteur

Culprit: Kevin De Bruyne

Curved Corner · Smart Cleats · Left-Footed · Curly Fade · Wet Pitch

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Integers): "THE SABOTEUR DOES NOT WEAR TINTED VISORS"

$(-8) + 12 = 4$ (T) · $7 - (-7) = 14$ (R) · $(-14) + 36 = 22$ (N) · $(-6) + 17 = 11$ (H) · $(-9) + 30 = 21$ (B) · $(-7) + 31 = 24$ (O) · $(-6) + 8 = 2$ (S) · $(-9) + 12 = 3$ (U) · $(-2) + 22 = 20$ (A) · $11 - (-8) = 19$ (W) · $24 - (-2) = 26$ (D) · $8 - (-10) = 18$ (E) · $(-9) + 22 = 13$ (I) · $(-14) + 23 = 9$ (V)

Clue 2 (Percentages): "THE SNEAKY STRIKER WAS LEFT FOOTED"

5% of 320 = 16 (T) · 5% of 120 = 6 (E) · 25% of 236 = 59 (K) · 50% of 68 = 34 (D) · 10% of 170 = 17 (Y) · 75% of 40 = 30 (N) · 25% of 108 = 27 (F) · 20% of 65 = 13 (A) · 5% of 860 = 43 (S) · 75% of 76 = 57 (L) · 50% of 106 = 53 (O) · 60% of 15 = 9 (H) · 40% of 125 = 50 (W) · 10% of 150 = 15 (I) · 20% of 140 = 28 (R)

Clue 3 (Order of operations): "A WET PITCH STOPPED THE SNEAKY RUNNER"

$41 + 7 \times 3 = 62$ (A) · $9 \times 10 - 20 = 70$ (I) · $8 \times 12 - 13 = 83$ (T) · $12 \times 11 - 22 = 110$ (Y) · $11 \times 8 - 3 = 85$ (C) · $10 \times 12 - 9 = 111$ (D) · $9 \times 12 - 22 = 86$ (U) · $70 + 7 \times 3 = 91$ (R) · $12 \times 11 - 14 = 118$ (E) · $52 + 3 \times 7 = 73$ (P) · $77 + 5 \times 5 = 102$ (O) · $61 + 3 \times 7 = 82$ (W) · $6 \times 8 - 22 = 26$ (S) · $9 \times 8 - 12 = 60$ (K) · $12 \times 8 - 1 = 95$ (H) · $7 \times 10 - 6 = 64$ (N)

Clue 4 (Exponents): "THE CAMERA FOOTAGE SHOWS A CURLY FADE"

$3^2 = 9$ (T) · $7^3 = 343$ (H) · $6^3 = 216$ (U) · $2^2 = 4$ (F) · $20^2 = 400$ (A) · $2^7 = 128$ (D) · $11^2 = 121$ (R) · $3^3 = 27$ (G) · $5^2 = 25$ (L) · $16^2 = 256$ (W) · $10^2 = 100$ (O) · $7^2 = 49$ (S) · $3^4 = 81$ (E) · $2^5 = 32$ (C) · $2^4 = 16$ (Y) · $15^2 = 225$ (M)

Clue 5 (Two-step equations): surviving statement is box 6 → Kevin De Bruyne

$5x + 9 = 34, x = 5$ · $5x + 8 = 58, x = 10$ · $3x + 5 = 11, x = 2$ · $5x + 8 = 28, x = 4$ · $4x + 8 = 44, x = 9$ · $4x + 2 = 34, x = 8$ · $4x + 6 = 10, x = 1$ · $4x + 4 = 48, x = 11$ · $2x + 10 = 34, x = 12$ · $3x + 2 = 23, x = 7$ · $6x + 9 = 27, x = 3$