

The Golden Whistle Heist

Grade 10 math · Pythagorean theorem, Word problems, Bar models, Square roots, Division · Reading level grades 7-9

Detective: _____ Date: _____

Just hours before the draft, the legendary Golden Whistle was stolen from the central display case! A mysterious Rogue Coordinator has infiltrated the museum, leaving scrambled playbooks in their wake. We must analyze the evidence to save the football season.

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 Rogue Coordinator is _____

Possible suspects

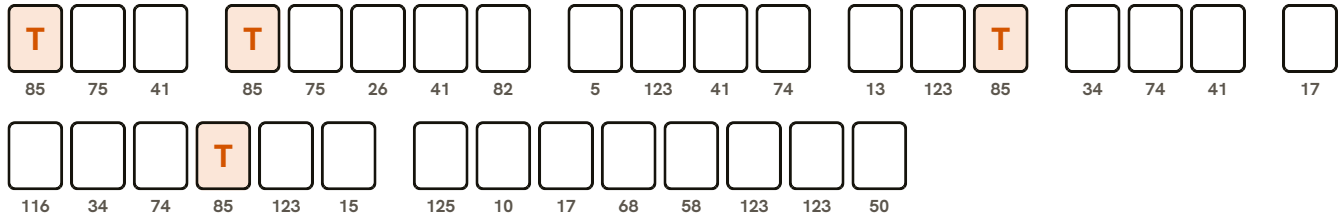
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SIGNATURE PLAY	DRAFT DAY GEAR	THROWING HAND	HELMET STICKER	DEFENSIVE COVER
Patrick Mahomes	Option Run	Laser Visor	Left-Handed	Skull Sticker	Zone Coverage
Stefon Diggs	Flea Flicker	Smart Watch	Right-Handed	Star Sticker	Zone Coverage
Dak Prescott	Option Run	Smart Watch	Right-Handed	Skull Sticker	Man Coverage
Travis Kelce	Blitz Package	Smart Watch	Right-Handed	Lightning Bolt Sticker	Double Team
Russell Wilson	Flea Flicker	Custom Playbook	Right-Handed	Star Sticker	Zone Coverage
Justin Jefferson	Screen Pass	Laser Visor	Left-Handed	Lightning Bolt Sticker	Double Team
TJ Watt	Hail Mary Pass	Heated Parka	Right-Handed	Star Sticker	Zone Coverage
Tom Brady	Hail Mary Pass	Laser Visor	Right-Handed	Skull Sticker	Zone Coverage
Jalen Hurts	Blitz Package	Custom Playbook	Left-Handed	Skull Sticker	Double Team
Saquon Barkley	Option Run	Smart Watch	Right-Handed	Star Sticker	Double Team
Joe Burrow	Option Run	Heated Parka	Right-Handed	Star Sticker	Zone Coverage
Lamar Jackson	Hail Mary Pass	Heated Parka	Right-Handed	Skull Sticker	Zone Coverage
Peyton Manning	Screen Pass	Laser Visor	Right-Handed	Star Sticker	Man Coverage
Derrick Henry	Hail Mary Pass	Laser Visor	Right-Handed	Star Sticker	Zone Coverage
Davante Adams	Screen Pass	Golden Cleats	Left-Handed	Star Sticker	Zone Coverage
Micah Parsons	Option Run	Golden Cleats	Right-Handed	Star Sticker	Man Coverage
Nick Chubb	Flea Flicker	Custom Playbook	Left-Handed	Skull Sticker	Man Coverage
Tyreek Hill	Blitz Package	Golden Cleats	Right-Handed	Lightning Bolt Sticker	Zone Coverage
Christian McCaffrey	Blitz Package	Golden Cleats	Right-Handed	Star Sticker	Double Team
Aaron Rodgers	Blitz Package	Smart Watch	Left-Handed	Lightning Bolt Sticker	Double Team
Josh Allen	Flea Flicker	Golden Cleats	Right-Handed	Skull Sticker	Double Team

CLUE 1 Pythagorean theorem

The coaches are mapping out player workloads on a giant whiteboard using long rectangular bar models. By comparing the colored blocks of turf-time, we can decipher a hidden message about the thief's gear.

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



legs 40 and 75, hypotenuse = → **T**

legs 18 and 80, hypotenuse = → **F**

legs 80 and 84, hypotenuse = → **C**

legs 24 and 70, hypotenuse = → **S**

legs 8 and 15, hypotenuse = → **A**

legs 27 and 120, hypotenuse = → **O**

legs 9 and 12, hypotenuse = → **M**

legs 6 and 8, hypotenuse = → **L**

legs 40 and 42, hypotenuse = → **B**

legs 30 and 40, hypotenuse = → **K**

legs 3 and 4, hypotenuse = → **D**

legs 16 and 30, hypotenuse = → **U**

legs 10 and 24, hypotenuse = → **I**

legs 35 and 120, hypotenuse = → **P**

legs 5 and 12, hypotenuse = → **N**

legs 9 and 40, hypotenuse = → **E**

legs 21 and 72, hypotenuse = → **H**

legs 32 and 60, hypotenuse = → **Y**

Scratch space:

CLUE 2

Word problems

The head coach left a complex word problem in the locker room detailing total passing yards and team touchdowns. Solving this math riddle will point us toward the suspect's physical profile.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was R D E D .

42 83 113 46 82 46 14 70

There were 74 cleats. 32 were used up. How many cleats are left?

Answer: → R

Quarterback found 4 whistles yesterday and 42 more today. How many whistles in all?

Answer: → H

Quarterback found 34 playbooks yesterday and 49 more today. How many playbooks in all?

Answer: → I

Quarterback found 60 playbooks yesterday and 53 more today. How many playbooks in all?

Answer: → G

Quarterback found 29 cleats yesterday and 53 more today. How many cleats in all?

Answer: → T

Quarterback found 6 footballs yesterday and 8 more today. How many footballs in all?

Answer: → A

There were 93 cleats. 23 were used up. How many cleats are left?

Answer: → N

Scratch space:

CLUE 3

Bar model word problems

A receiver ran a sharp diagonal route across the field, forming a perfect right triangle with the sidelines. Using the lengths of the two legs, we can calculate the hypotenuse and unlock the next clue.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

Someone scared the villain off with Z A G .

94 141 108 142 140 141 32 142 54 142

Quarterback shares 188 playbooks equally among 2 teams. How many playbooks does each team get?

draw a bar model

Answer: → Z

One group collected 123 whistles and another group collected 19 whistles. How many whistles in all?

draw a bar model

Answer: → E

Quarterback has 9 times as many playbooks as a teammate. The teammate has 12 playbooks. How many playbooks does quarterback have?

draw a bar model

Answer: → N

There were 180 helmets in all. 40 helmets were used. How many helmets are left?

draw a bar model

Answer: → C

Quarterback has 216 footballs, packed 4 to a bag. How many bags can be filled?

draw a bar model

Answer: → R

The red team has 147 footballs and the blue team has 6 footballs. How many more footballs does the red team have?

draw a bar model

Answer: → O

Quarterback shares 192 whistles equally among 6 teams. How many whistles does each team get?

draw a bar model

Answer: → V

CLUE 4 Square roots

The groundskeeper marked off a perfectly square practice grid in the endzone. By finding the square root of its total area, we get the exact yardage marker where the thief dropped a clue.

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

W																		
21	22	10	3	6	13	5	7	12	20	7	9	12	20	15	8	19	22	9
3	13	20	18	22	20	6	9	10										

$\text{sqrt}(441) = \square \rightarrow \text{W}$	$\text{sqrt}(169) = \square \rightarrow \text{N}$	$\text{sqrt}(324) = \square \rightarrow \text{H}$
$\text{sqrt}(225) = \square \rightarrow \text{I}$	$\text{sqrt}(49) = \square \rightarrow \text{A}$	$\text{sqrt}(361) = \square \rightarrow \text{K}$
$\text{sqrt}(9) = \square \rightarrow \text{O}$	$\text{sqrt}(25) = \square \rightarrow \text{D}$	$\text{sqrt}(81) = \square \rightarrow \text{R}$
$\text{sqrt}(100) = \square \rightarrow \text{F}$	$\text{sqrt}(64) = \square \rightarrow \text{C}$	$\text{sqrt}(484) = \square \rightarrow \text{E}$
$\text{sqrt}(400) = \square \rightarrow \text{T}$	$\text{sqrt}(144) = \square \rightarrow \text{S}$	$\text{sqrt}(36) = \square \rightarrow \text{U}$

Scratch space:

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

The offensive line needs to divide up the recovery drinks and energy bars equally among the five squads. Splitting these numbers gives us the final detail we need to catch the rogue coordinator.

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:

$60 \div 6 = \boxed{}$

$5 \div 1 = \boxed{}$

$36 \div 3 = \boxed{}$

$27 \div 3 = \boxed{}$

$9 \div 9 = \boxed{}$

$22 \div 11 = \boxed{}$

$63 \div 9 = \boxed{}$

$12 \div 2 = \boxed{}$

$18 \div 6 = \boxed{}$

$33 \div 3 = \boxed{}$

$48 \div 6 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain executes a sneaky Option Run, then scribbles in a Custom Playbook.
2. The villain calls a massive Blitz Package, then scribbles in a Custom Playbook.
3. The villain calls a massive Blitz Package, then sprints away in Golden Cleats.
4. The villain executes a sneaky Option Run, then hides inside a giant Heated Parka.
5. The villain pulls off a tricky Flea Flicker, then checks stats on a Smart Watch.
6. The villain launches a wild Hail Mary Pass, then scribbles in a Custom Playbook.
7. The villain executes a sneaky Option Run, then sprints away in Golden Cleats.
8. The villain deploys a sudden Screen Pass, then hides inside a giant Heated Parka.
9. The villain deploys a sudden Screen Pass, then sprints away in Golden Cleats.
10. The villain launches a wild Hail Mary Pass, then glares through a Laser Visor.
11. The villain launches a wild Hail Mary Pass, then sprints away in Golden Cleats.
12. The villain launches a wild Hail Mary Pass, then hides inside a giant Heated Parka.

Answer Key

The Golden Whistle Heist

Culprit: Joe Burrow

Option Run · Heated Parka · Right-Handed · Star Sticker · Zone Coverage

Trail: Start 21 → Clue 1 18 → Clue 2 14 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Pythagorean theorem): "THE THIEF DOES NOT USE A CUSTOM PLAYBOOK"

legs 40 and 75, hypotenuse = 85 (T) · legs 18 and 80, hypotenuse = 82 (F) · legs 80 and 84, hypotenuse = 116 (C) · legs 24 and 70, hypotenuse = 74 (S) · legs 8 and 15, hypotenuse = 17 (A) · legs 27 and 120, hypotenuse = 123 (O) · legs 9 and 12, hypotenuse = 15 (M) · legs 6 and 8, hypotenuse = 10 (L) · legs 40 and 42, hypotenuse = 58 (B) · legs 30 and 40, hypotenuse = 50 (K) · legs 3 and 4, hypotenuse = 5 (D) · legs 16 and 30, hypotenuse = 34 (U) · legs 10 and 24, hypotenuse = 26 (I) · legs 35 and 120, hypotenuse = 125 (P) · legs 5 and 12, hypotenuse = 13 (N) · legs 9 and 40, hypotenuse = 41 (E) · legs 21 and 72, hypotenuse = 75 (H) · legs 32 and 60, hypotenuse = 68 (Y)

Clue 2 (Word problems): "RIGHT HANDED"

There were 74 cleats. 32 were used up. How many cleats are left? = 42 (R) · Quarterback found 4 whistles yesterday and 42 more today. How many whistles in all? = 46 (H) · Quarterback found 34 playbooks yesterday and 49 more today. How many playbooks in all? = 83 (I) · Quarterback found 60 playbooks yesterday and 53 more today. How many playbooks in all? = 113 (G) · Quarterback found 29 cleats yesterday and 53 more today. How many cleats in all? = 82 (T) · Quarterback found 6 footballs yesterday and 8 more today. How many footballs in all? = 14 (A) · There were 93 cleats. 23 were used up. How many cleats are left? = 70 (N)

Clue 3 (Bar model word problems): "ZONE COVERAGE"

Quarterback shares 188 playbooks equally among 2 teams. How many playbooks does each team get? = 94 (Z) · One group collected 123 whistles and another group collected 19 whistles. How many whistles in all? = 142 (E) · Quarterback has 9 times as many playbooks as a teammate. The teammate has 12 playbooks. How many playbooks does quarterback have? = 108 (N) · There were 180 helmets in all. 40 helmets were used. How many helmets are left? = 140 (C) · Quarterback has 216 footballs, packed 4 to a bag. How many bags can be filled? = 54 (R) · The red team has 147 footballs and the blue team has 6 footballs. How many more footballs does the red team have? = 141 (O) · Quarterback shares 192 whistles equally among 6 teams. How many whistles does each team get? = 32 (V)

Clue 4 (Square roots): "WE FOUND A STAR STICKER ON THE TURF"

$\sqrt{441} = 21$ (W) · $\sqrt{169} = 13$ (N) · $\sqrt{324} = 18$ (H) · $\sqrt{225} = 15$ (I) · $\sqrt{49} = 7$ (A) · $\sqrt{361} = 19$ (K) · $\sqrt{9} = 3$ (O) · $\sqrt{25} = 5$ (D) · $\sqrt{81} = 9$ (R) · $\sqrt{100} = 10$ (F) · $\sqrt{64} = 8$ (C) · $\sqrt{484} = 22$ (E) · $\sqrt{400} = 20$ (T) · $\sqrt{144} = 12$ (S) · $\sqrt{36} = 6$ (U)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Joe Burrow

$60 \div 6 = 10$ · $5 \div 1 = 5$ · $36 \div 3 = 12$ · $27 \div 3 = 9$ · $9 \div 9 = 1$ · $22 \div 11 = 2$ · $63 \div 9 = 7$ · $12 \div 2 = 6$ · $18 \div 6 = 3$ · $33 \div 3 = 11$ · $48 \div 6 = 8$