The Great Ticket Heist

Grade 4 math · Fractions of a number, Bar models, Word problems, Rounding · Reading level grades 3-4

Detective: _____ **Date:** _____

Just hours before the World Cup final, someone snuck into the VIP office and took every single ticket! The security cameras were offline, but the thief left behind a trail of sports gear and tactical clues. Check the coach roster and help us save the big game!

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 coach is _____

Possible suspects

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

NAME	COACHING TOOL	SPECIAL GEAR	HEADGEAR STYLE	HAIR STYLE	SECRET FLAW
Coach of Croatia	tactical laser pointer	holographic replay watch	wears a team cap	cropped blonde hair	gets distracted by loud horns
Coach of Senegal	tactical laser pointer	turbo soccer ball launcher	goes bareheaded	curly silver hair	cannot stand soggy grass
Coach of England	super-grip goalkeeper gloves	golden whistle	goes bareheaded	curly silver hair	gets dizzy from stadium lights
Coach of Japan	digital playbook tablet	holographic replay watch	wears a team cap	spiky black hair	cannot stand soggy grass
Coach of Canada	high-speed megaphone	golden whistle	wears a team cap	spiky black hair	gets dizzy from stadium lights
Coach of Spain	super-grip goalkeeper gloves	holographic replay watch	wears a team cap	cropped blonde hair	gets distracted by loud horns
Coach of Argentina	sonic coaching whistle	golden whistle	wears a team cap	curly silver hair	cannot stand soggy grass
Coach of South Korea	sonic coaching whistle	speed-boosting cleats	wears a team cap	curly silver hair	cannot stand soggy grass
Coach of Italy	high-speed megaphone	speed-boosting cleats	wears a team cap	curly silver hair	gets dizzy from stadium lights
Coach of Portugal	high-speed megaphone	golden whistle	wears a team cap	spiky black hair	cannot stand soggy grass
Coach of Brazil	digital playbook tablet	magnetic tactics board	wears a team cap	curly silver hair	cannot stand soggy grass
Coach of Belgium	sonic coaching whistle	magnetic tactics board	wears a team cap	curly silver hair	cannot stand soggy grass
Coach of Uruguay	tactical laser pointer	speed-boosting cleats	wears a team cap	cropped blonde hair	gets dizzy from stadium lights
Coach of Sweden	tactical laser pointer	golden whistle	goes bareheaded	spiky black hair	gets distracted by loud horns
Coach of USA	sonic coaching whistle	magnetic tactics board	wears a team cap	cropped blonde hair	gets distracted by loud horns
Coach of Nigeria	sonic coaching whistle	magnetic tactics board	goes bareheaded	curly silver hair	gets distracted by loud horns
Coach of Morocco	sonic coaching whistle	holographic replay watch	goes bareheaded	curly silver hair	gets distracted by loud horns
Coach of Colombia	super-grip goalkeeper gloves	turbo soccer ball launcher	goes bareheaded	curly silver hair	cannot stand soggy grass
Coach of New Zealand	digital playbook tablet	golden whistle	goes bareheaded	curly silver hair	cannot stand soggy grass
Coach of Mexico	high-speed megaphone	speed-boosting cleats	wears a team cap	curly silver hair	cannot stand soggy grass
Coach of France	tactical laser pointer	turbo soccer ball launcher	wears a team cap	spiky black hair	gets distracted by loud horns

CLUE 1 Fractions of a number

> Our young mascot is sorting through lost training cones to find a hidden note. Help them solve these word problems to figure out what gear the thief avoids.

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

T			T										T										
6	40	10	6	40	7	10	4	31	8	10	36	20	8	6	32	36	10						
T														T									
6	40	10	21	8	25	31	10	20	26	40	7	36	6	25	10								

2/8 of 24 = ☐ → T

1/2 of 64 = ☐ → U

2/8 of 124 = ☐ → D

1/2 of 42 = ☐ → G

2/5 of 90 = ☐ → S

4/10 of 25 = ☐ → E

4/8 of 80 = ☐ → H

2/10 of 130 = ☐ → W

4/8 of 14 = ☐ → I

4/5 of 5 = ☐ → F

2/3 of 12 = ☐ → O

2/6 of 75 = ☐ → L

1/5 of 100 = ☐ → N

Scratch space:

CLUE 2 Bar models

The gate guards are looking at bar models of ticket sales. Complete the bars to see which soccer field exit the thief used to escape.

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

A witness saw the villain was

W										C		P
34	55	13	11	57	13	49	55	13	42		13	

.

One part is 20 and the other part is 14. What is the whole?

draw a bar model

Answer: ☐ → W

One part is 2 and the other part is 40. What is the whole?

draw a bar model

Answer: ☐ → M

One bar shows 33 and the other shows 20. How much longer is the first bar?

draw a bar model

Answer: ☐ → A

The whole is 66. One part is 17. What is the other part?

draw a bar model

Answer: ☐ → T

One bar shows 56 and the other shows 1. How much longer is the first bar?

draw a bar model

Answer: ☐ → E

One part is 52 and the other part is 5. What is the whole?

draw a bar model

Answer: ☐ → S

One bar shows 22 and the other shows 11. How much longer is the first bar?

draw a bar model

Answer: ☐ → R

CLUE 3 Word problems

> We found a pile of discarded team jerseys. Calculate fractions of this gear to see what hair color the thief left behind at the scene.

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

Someone scared the villain off with

C													G	G	Y	G	R			
32	51	61	61	79	76	13	76	51	61	71	13	79						51	13	13

.

The stadium volunteer lined up 4 rows of 8 team jerseys. How many team jerseys in all? ☐ → C

There were 106 practice cones. 27 were used up. How many practice cones are left? ☐ → O

There were 66 water bottles. 5 were used up. How many water bottles are left? ☐ → N

The stadium volunteer found 26 team jerseys yesterday and 45 more today. How many team jerseys in all? → D

The stadium volunteer found 18 team jerseys yesterday and 33 more today. How many team jerseys in all? → A

There were 102 practice cones. 26 were used up. How many practice cones are left? ☐ → T

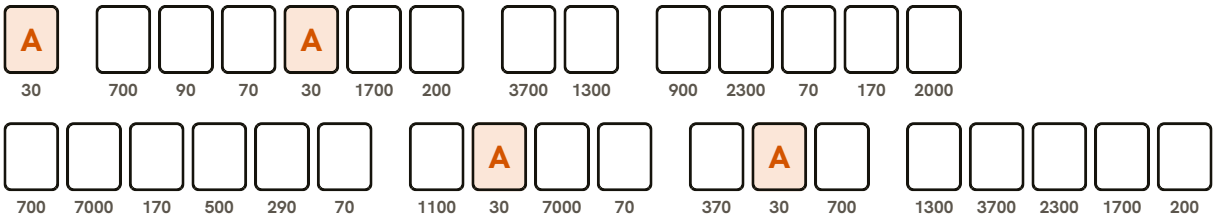
The stadium volunteer found 11 penalty flags yesterday and 2 more today. How many penalty flags in all? → S

Scratch space:

CLUE 4 Rounding

> The digital turnstile screen is flashing numbers that have been rounded to the nearest ten. Round the digits to unlock the gate and reveal the suspect's tell.

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



Round 33 to the nearest ten ☐ → A

Round 1,258 to the nearest hundred ☐ → F

Round 1,060 to the nearest hundred ☐ → H

Round 1,735 to the nearest hundred ☐ → N

Round 291 to the nearest ten ☐ → E

Round 461 to the nearest hundred ☐ → V

Round 204 to the nearest hundred ☐ → D

Round 2,135 to the nearest thousand ☐ → Y

Round 900 to the nearest hundred ☐ → C

Round 72 to the nearest ten ☐ → R

Round 374 to the nearest ten ☐ → W

Round 173 to the nearest ten ☐ → L

Round 2,338 to the nearest hundred ☐ → U

Round 701 to the nearest hundred ☐ → S

Round 7,451 to the nearest thousand ☐ → I

Round 3,702 to the nearest hundred ☐ → O

Round 92 to the nearest ten ☐ → T

Scratch space:

CLUE 5 Fractions of a number - the last clue

> The referee is dividing up soccer balls for the warm-up drills. Work out these fractions of the ball counts to find the thief's secret weakness.

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:

1/5 of 25 = ☐	5/8 of 16 = ☐	1/2 of 16 = ☐	8/10 of 5 = ☐
2/6 of 9 = ☐	1/3 of 6 = ☐	1/4 of 44 = ☐	3/6 of 14 = ☐
2/4 of 2 = ☐	4/6 of 18 = ☐	1/8 of 72 = ☐	

Step 2 - cross out the sentence with each answer:

1. The villain shouts through a high-speed megaphone, then folds up a magnetic tactics board.
2. The villain flashes a tactical laser pointer, then fires a turbo soccer ball launcher.
3. The villain shouts through a high-speed megaphone, then polishes a golden whistle.
4. The villain flashes a tactical laser pointer, then polishes a golden whistle.
5. The villain blows a sonic coaching whistle, then folds up a magnetic tactics board.
6. The villain taps on a digital playbook tablet, then folds up a magnetic tactics board.
7. The villain flashes a tactical laser pointer, then sprints away in speed-boosting cleats.
8. The villain blows a sonic coaching whistle, then sprints away in speed-boosting cleats.
9. The villain taps on a digital playbook tablet, then clicks a holographic replay watch.
10. The villain shouts through a high-speed megaphone, then sprints away in speed-boosting cleats.
11. The villain blows a sonic coaching whistle, then clicks a holographic replay watch.
12. The villain taps on a digital playbook tablet, then fires a turbo soccer ball launcher.

TEACHER / PARENT

Answer Key

The Great Ticket Heist

Culprit: Coach of Brazil

digital playbook tablet · magnetic tactics board · wears a team cap · curly silver hair · cannot stand soggy grass

Trail: Start 21 → Clue 1 15 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE THIEF DOES NOT USE THE GOLDEN WHISTLE"

2/8 of 24 = 6 (T) · 1/2 of 64 = 32 (U) · 2/8 of 124 = 31 (D) · 1/2 of 42 = 21 (G) · 2/5 of 90 = 36 (S) · 4/10 of 25 = 10 (E) · 4/8 of 80 = 40 (H) · 2/10 of 130 = 26 (W) · 4/8 of 14 = 7 (I) · 4/5 of 5 = 4 (F) · 2/3 of 12 = 8 (O) · 2/6 of 75 = 25 (L) · 1/5 of 100 = 20 (N)

Clue 2 (Bar models): "WEARS A TEAM CAP"

One part is 20 and the other part is 14. What is the whole? = 34 (W) · One part is 2 and the other part is 40. What is the whole? = 42 (M) · One bar shows 33 and the other shows 20. How much longer is the first bar? = 13 (A) · The whole is 66. One part is 17. What is the other part? = 49 (T) · One bar shows 56 and the other shows 1. How much longer is the first bar? = 55 (E) · One part is 52 and the other part is 5. What is the whole? = 57 (S) · One bar shows 22 and the other shows 11. How much longer is the first bar? = 11 (R)

Clue 3 (Word problems): "CANNOT STAND SOGGY GRASS"

The stadium volunteer lined up 4 rows of 8 team jerseys. How many team jerseys in all? = 32 (C) · There were 106 practice cones. 27 were used up. How many practice cones are left? = 79 (O) · There were 66 water bottles. 5 were used up. How many water bottles are left? = 61 (N) · The stadium volunteer found 26 team jerseys yesterday and 45 more today. How many team jerseys in all? = 71 (D) · The stadium volunteer found 18 team jerseys yesterday and 33 more today. How many team jerseys in all? = 51 (A) · There were 102 practice cones. 26 were used up. How many practice cones are left? = 76 (T) · The stadium volunteer found 11 penalty flags yesterday and 2 more today. How many penalty flags in all? = 13 (S)

Clue 4 (Rounding): "A STRAND OF CURLY SILVER HAIR WAS FOUND"

Round 33 to the nearest ten = 30 (A) · Round 1,258 to the nearest hundred = 1300 (F) · Round 1,060 to the nearest hundred = 1100 (H) · Round 1,735 to the nearest hundred = 1700 (N) · Round 291 to the nearest ten = 290 (E) · Round 461 to the nearest hundred = 500 (V) · Round 204 to the nearest hundred = 200 (D) · Round 2,135 to the nearest thousand = 2000 (Y) · Round 900 to the nearest hundred = 900 (C) · Round 72 to the nearest ten = 70 (R) · Round 374 to the nearest ten = 370 (W) · Round 173 to the nearest ten = 170 (L) · Round 2,338 to the nearest hundred = 2300 (U) · Round 701 to the nearest hundred = 700 (S) · Round 7,451 to the nearest thousand = 7000 (I) · Round 3,702 to the nearest hundred = 3700 (O) · Round 92 to the nearest ten = 90 (T)

Clue 5 (Fractions of a number): surviving statement is box 6 → Coach of Brazil

1/5 of 25 = 5 · 5/8 of 16 = 10 · 1/2 of 16 = 8 · 8/10 of 5 = 4 · 2/6 of 9 = 3 · 1/3 of 6 = 2 · 1/4 of 44 = 11 · 3/6 of 14 = 7 · 2/4 of 2 = 1 · 4/6 of 18 = 12 · 1/8 of 72 = 9