The Golden Whistle Mystery

Grade 3 math · Multiplication, Word problems, Multi-step word problems, Subtraction, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

Just before the final championship match of the summer tournament, someone snuck onto the sand court and stole the coveted Golden Whistle! Coach Sandy needs your math skills to narrow down the suspects and catch the court bandit.

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 Golden Whistle Thief is _____

Possible suspects

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

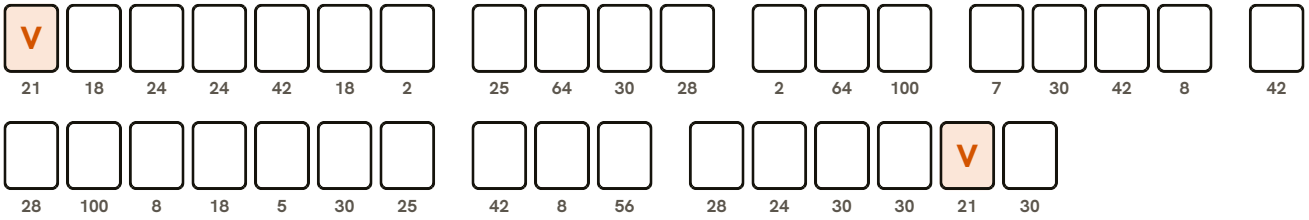
NAME	SIGNATURE PLAY	LUCKY GEAR	SERVING HAND	HAIRSTYLE	EQUIPMENT FLAW
Kathryn Plummer	Jump Serve	Neon Visor	Right Handed Server	High Ponytail	Squeaky Sneakers
Logan Tom	Power Block	Neon Visor	Right Handed Server	Braided Bun	Torn Finger Tape
Misty May	Float Serve	Neon Visor	Left Handed Server	High Ponytail	Squeaky Sneakers
Lauren Carlini	Power Block	Gold Kneepads	Right Handed Server	High Ponytail	Squeaky Sneakers
Maxwell Holt	Sky Ball Serve	Bright Laces	Left Handed Server	Braided Bun	Squeaky Sneakers
Taylor Sander	Sky Ball Serve	Bright Laces	Right Handed Server	High Ponytail	Loose Elbow Guard
Jordan Larson	Float Serve	Neon Visor	Left Handed Server	Braided Bun	Loose Elbow Guard
Kerri Walsh	Underhand Spike	Bright Laces	Left Handed Server	High Ponytail	Squeaky Sneakers
Erik Shoji	Float Serve	Gold Kneepads	Left Handed Server	Braided Bun	Loose Elbow Guard
Alisha Glass	Jump Serve	Bright Laces	Left Handed Server	Braided Bun	Squeaky Sneakers
April Ross	Power Block	Bright Laces	Left Handed Server	High Ponytail	Squeaky Sneakers
Aaron Russell	Underhand Spike	Gold Kneepads	Left Handed Server	Spiky Hair	Squeaky Sneakers
Justine Wong	Float Serve	Gold Kneepads	Right Handed Server	High Ponytail	Squeaky Sneakers
Tori Dixon	Underhand Spike	Gold Kneepads	Left Handed Server	High Ponytail	Squeaky Sneakers
TJ DeFalco	Power Block	Striped Arm Sleeve	Left Handed Server	High Ponytail	Squeaky Sneakers
Jenna Gray	Underhand Spike	Neon Visor	Left Handed Server	High Ponytail	Torn Finger Tape
Micah Christenson	Underhand Spike	Gold Kneepads	Left Handed Server	High Ponytail	Torn Finger Tape
Matt Anderson	Underhand Spike	Striped Arm Sleeve	Left Handed Server	Braided Bun	Torn Finger Tape
Kelsey Robinson	Jump Serve	Sparkle Wristband	Left Handed Server	Spiky Hair	Torn Finger Tape
Chiaka Ogbogu	Power Block	Bright Laces	Right Handed Server	Spiky Hair	Torn Finger Tape
Foluke Akinradewo	Power Block	Neon Visor	Right Handed Server	Spiky Hair	Torn Finger Tape

make your own at mathcrackers.com

CLUE 1 Multiplication facts (1-12)

Coach Sandy arranged the volleyball racks in equal rows to count the balls.

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



3 × 7 = ☐ → V	5 × 5 = ☐ → D	1 × 8 = ☐ → R	8 × 8 = ☐ → O
3 × 8 = ☐ → L	10 × 10 = ☐ → T	3 × 10 = ☐ → E	
7 × 1 = ☐ → W	7 × 4 = ☐ → S	2 × 1 = ☐ → N	7 × 8 = ☐ → M
6 × 7 = ☐ → A	9 × 2 = ☐ → I	1 × 5 = ☐ → P	

Scratch space:

CLUE 2 Word problems

> The team checked the score sheets from practice drills to track down clues.

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

A witness saw the villain was

L							D		D	S		R	V		R
40	65	53	31	16	10	9		65			65			65	

.

Coach Sandy lined up 4 rows of 10 court towels. How many court towels in all?

Answer: ☐ → **L**

There were 85 court towels. 32 were used up. How many court towels are left?

Answer: ☐ → **F**

Coach Sandy lined up 4 rows of 4 water bottles. How many water bottles in all?

Answer: ☐ → **H**

There were 55 kneepads. 24 were used up. How many kneepads are left?

Answer: ☐ → **T**

Coach Sandy lined up 2 rows of 5 whistles. How many whistles in all?

Answer: ☐ → **A**

Coach Sandy found 2 volleyballs yesterday and 7 more today. How many volleyballs in all?

Answer: ☐ → **N**

Coach Sandy found 29 kneepads yesterday and 36 more today. How many kneepads in all?

Answer: ☐ → **E**

Scratch space:

CLUE 3 Multi-step word problems

> The tournament director calculated the points won across three different sets.

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

Someone scared the villain off with

S							S	N					R	S
23	7	21	11	40	13	16	23		11	40	13	11		23

.

There were 81 volleyballs in all. 1 Spike City Stars used 35 volleyballs each. The other 2 Spike City Stars shared the rest equally. How many volleyballs did each of the other Spike City Stars get?

Answer: ☐ → **S**

Coach Sandy earned 3 kneepads in each of 6 rounds, plus 1 bonus kneepads. Then 6 kneepads were lost. How many kneepads are left?

Answer: ☐ → **K**

There were 58 volleyballs in all. 37 volleyballs were set aside. The rest were shared equally among 3 Spike City Stars. How many volleyballs did each get?

Answer: ☐ → **Q**

Coach Sandy earned 6 volleyballs in each of 2 rounds, plus 1 bonus volleyballs. Then 2 volleyballs were lost. How many volleyballs are left?

Answer: ☐ → **E**

Coach Sandy collected 67 volleyballs in the morning and 29 volleyballs in the afternoon, then split them equally among 6 Spike City Stars. How many volleyballs did each get?

Answer: ☐ → **Y**

Coach Sandy collected 16 whistles in the morning and 47 whistles in the afternoon, then split them equally among 3 Spike City Stars. How many whistles did each get?

Answer: ☐ → **U**

There were 427 court towels in all. 27 court towels were set aside. The rest were shared equally among 10 Spike City Stars. How many court towels did each get?

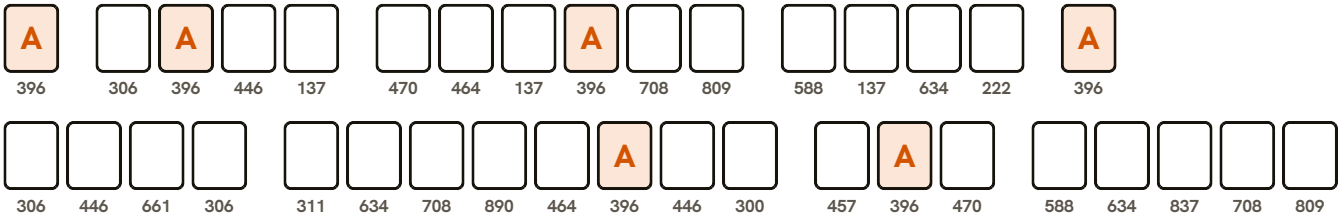
Answer: ☐ → **A**

Scratch space:

CLUE 4 Subtraction

> The ball boy subtracted missing equipment from the total inventory list.

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



514 - 118 = ☐ → A

330 - 19 = ☐ → P

968 - 307 = ☐ → G

674 - 204 = ☐ → S

373 - 67 = ☐ → H

658 - 212 = ☐ → I

955 - 367 = ☐ → F

816 - 182 = ☐ → O

1135 - 326 = ☐ → D

524 - 302 = ☐ → M

1007 - 170 = ☐ → U

558 - 94 = ☐ → T

477 - 177 = ☐ → L

538 - 81 = ☐ → W

1233 - 343 = ☐ → Y

1095 - 387 = ☐ → N

241 - 104 = ☐ → R

Scratch space:

CLUE 5 Missing addends - the last clue

> The captain figured out how many more points were needed to hit the target score.

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 + ___ = 11 ☐	4 + ___ = 7 ☐	1 + ___ = 10 ☐	9 + ___ = 13 ☐
1 + ___ = 8 ☐	10 + ___ = 12 ☐	9 + ___ = 14 ☐	9 + ___ = 10 ☐
4 + ___ = 16 ☐	6 + ___ = 17 ☐	7 + ___ = 15 ☐	

Step 2 - cross out the sentence with each answer:

1. The villain blocked the final shot, then snatched the winning medal.
2. The villain served across the net, then snatched the winning medal.
3. The villain set the high pass, then snatched the winning medal.
4. The villain blocked the final shot, then snagged the golden whistle.
5. The villain set the high pass, then grabbed the shiny trophy.
6. The villain served across the net, then grabbed the shiny trophy.
7. The villain blocked the final shot, then swiped the team clipboard.
8. The villain spiked the game ball, then took the championship banner.
9. The villain dived onto the sand, then snatched the winning medal.
10. The villain dived onto the sand, then snagged the golden whistle.
11. The villain blocked the final shot, then grabbed the shiny trophy.
12. The villain set the high pass, then took the championship banner.

TEACHER / PARENT

Answer Key

The Golden Whistle Mystery

Culprit: Misty May

Float Serve · Neon Visor · Left Handed Server · High Ponytail · Squeaky Sneakers

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

Clue 1 (Multiplication facts (1-12)): "VILLAIN DOES NOT WEAR A STRIPED ARM SLEEVE"

3 × 7 = 21 (V) · 5 × 5 = 25 (D) · 1 × 8 = 8 (R) · 8 × 8 = 64 (O) · 3 × 8 = 24 (L) · 10 × 10 = 100 (T) · 3 × 10 = 30 (E) · 7 × 1 = 7 (W) · 7 × 4 = 28 (S) · 2 × 1 = 2 (N) · 7 × 8 = 56 (M) · 6 × 7 = 42 (A) · 9 × 2 = 18 (I) · 1 × 5 = 5 (P)

Clue 2 (Word problems): "LEFT HANDED SERVER"

Coach Sandy lined up 4 rows of 10 court towels. How many court towels in all? = 40 (L) · There were 85 court towels. 32 were used up. How many court towels are left? = 53 (F) · Coach Sandy lined up 4 rows of 4 water bottles. How many water bottles in all? = 16 (H) · There were 55 kneepads. 24 were used up. How many kneepads are left? = 31 (T) · Coach Sandy lined up 2 rows of 5 whistles. How many whistles in all? = 10 (A) · Coach Sandy found 2 volleyballs yesterday and 7 more today. How many volleyballs in all? = 9 (N) · Coach Sandy found 29 kneepads yesterday and 36 more today. How many kneepads in all? = 65 (E)

Clue 3 (Multi-step word problems): "SQUEAKY SNEAKERS"

There were 81 volleyballs in all. 1 Spike City Stars used 35 volleyballs each. The other 2 Spike City Stars shared the rest equally. How many volleyballs did each of the other Spike City Stars get? = 23 (S) · Coach Sandy earned 3 kneepads in each of 6 rounds, plus 1 bonus kneepads. Then 6 kneepads were lost. How many kneepads are left? = 13 (K) · There were 58 volleyballs in all. 37 volleyballs were set aside. The rest were shared equally among 3 Spike City Stars. How many volleyballs did each get? = 7 (Q) · Coach Sandy earned 6 volleyballs in each of 2 rounds, plus 1 bonus volleyballs. Then 2 volleyballs were lost. How many volleyballs are left? = 11 (E) · Coach Sandy collected 67 volleyballs in the morning and 29 volleyballs in the afternoon, then split them equally among 6 Spike City Stars. How many volleyballs did each get? = 16 (Y) · Coach Sandy collected 16 whistles in the morning and 47 whistles in the afternoon, then split them equally among 3 Spike City Stars. How many whistles did each get? = 21 (U) · There were 427 court towels in all. 27 court towels were set aside. The rest were shared equally among 10 Spike City Stars. How many court towels did each get? = 40 (A)

Clue 4 (Subtraction): "A HAIR STRAND FROM A HIGH PONYTAIL WAS FOUND"

514 - 118 = 396 (A) · 330 - 19 = 311 (P) · 968 - 307 = 661 (G) · 674 - 204 = 470 (S) · 373 - 67 = 306 (H) · 658 - 212 = 446 (I) · 955 - 367 = 588 (F) · 816 - 182 = 634 (O) · 1135 - 326 = 809 (D) · 524 - 302 = 222 (M) · 1007 - 170 = 837 (U) · 558 - 94 = 464 (T) · 477 - 177 = 300 (L) · 538 - 81 = 457 (W) · 1233 - 343 = 890 (Y) · 1095 - 387 = 708 (N) · 241 - 104 = 137 (R)

Clue 5 (Missing addends): surviving statement is box 6 → Misty May

1 + ___ = 11 = 10 · 4 + ___ = 7 = 3 · 1 + ___ = 10 = 9 · 9 + ___ = 13 = 4 · 1 + ___ = 8 = 7 · 10 + ___ = 12 = 2 · 9 + ___ = 14 = 5 · 9 + ___ = 10 = 1 · 4 + ___ = 16 = 12 · 6 + ___ = 17 = 11 · 7 + ___ = 15 = 8