The Case of the Missing Spark Gem

Grade 2 math · Place value, Addition, Subtraction, Skip counting, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone snagged the Golden Spark Gem right before the big Valley Tournament! Examine the clues to discover which trainer took it.

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 Monster Trainer is _____

Possible suspects

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

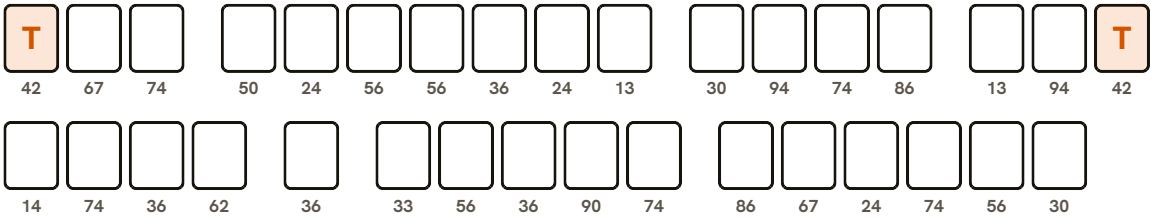
NAME	PARTNER ELEMENT	BATTLE GEAR	THROWING HAND	CAP COLOR	FAVORITE SNACK
Raihan	Flame	Flame Shield	Right Handed	Blue Cap	Berry Jam
Bede	Electric	Flame Shield	Left Handed	Blue Cap	Berry Jam
Mistina	Splash	Ice Badge	Left Handed	Green Cap	Berry Jam
Stevon	Electric	Ice Badge	Left Handed	Green Cap	Sweet Honey
Ilima	Splash	Speed Boots	Right Handed	Green Cap	Berry Jam
Beata	Shadow	Speed Boots	Left Handed	Green Cap	Berry Jam
Guzma	Shadow	Speed Boots	Left Handed	Red Cap	Sweet Honey
Ashford	Flame	Flame Shield	Left Handed	Blue Cap	Crunchy Seeds
Serene	Leaf	Ice Badge	Right Handed	Blue Cap	Crunchy Seeds
Kukui	Electric	Flame Shield	Right Handed	Green Cap	Sweet Honey
Clemont	Flame	Speed Boots	Left Handed	Red Cap	Sweet Honey
Gladion	Leaf	Volt Belt	Left Handed	Red Cap	Berry Jam
Brockton	Shadow	Volt Belt	Right Handed	Green Cap	Crunchy Seeds
Sonia	Electric	Power Ring	Left Handed	Blue Cap	Sweet Honey
Leona	Electric	Volt Belt	Left Handed	Green Cap	Berry Jam
Nessa	Splash	Power Ring	Left Handed	Green Cap	Sweet Honey
Cynthia	Flame	Power Ring	Right Handed	Blue Cap	Crunchy Seeds
Irisa	Electric	Ice Badge	Left Handed	Blue Cap	Berry Jam
Hau	Splash	Flame Shield	Left Handed	Green Cap	Berry Jam
Lillie	Leaf	Volt Belt	Left Handed	Green Cap	Berry Jam
Allister	Flame	Power Ring	Right Handed	Green Cap	Berry Jam

make your own at mathcrackers.com

CLUE 1 Place value

Detective Spark checks the electronic lock board where place value digits reveal the villain missing gear.

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



What number has 4 tens and 2 ones? ☐ → T

What number has 2 tens and 4 ones? ☐ → I

What number has 6 tens and 7 ones? ☐ → H

What number has 5 tens and 0 ones? ☐ → V

What number has 7 tens and 4 ones? ☐ → E

What number has 9 tens and 0 ones? ☐ → M

What number has 1 ten and 3 ones? ☐ → N

What number has 8 tens and 6 ones? ☐ → S

What number has 6 tens and 2 ones? ☐ → R

What number has 3 tens and 3 ones? ☐ → F

What number has 9 tens and 4 ones? ☐ → O

What number has 5 tens and 6 ones? ☐ → L

What number has 3 tens and 0 ones? ☐ → D

What number has 3 tens and 6 ones? ☐ → A

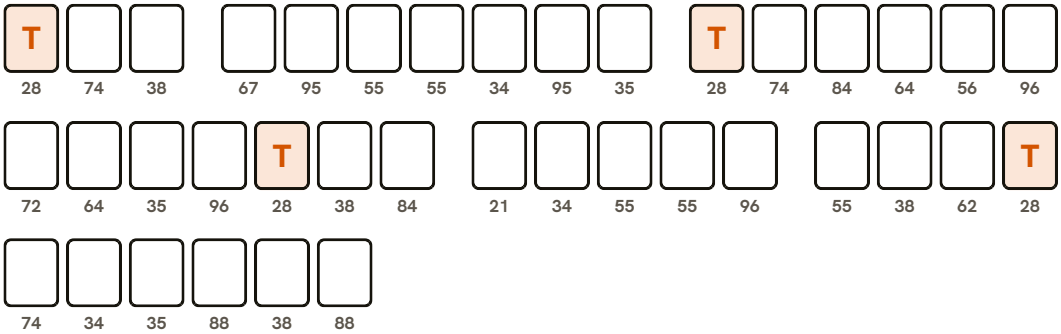
What number has 1 ten and 4 ones? ☐ → W

Scratch space:

CLUE 2 Addition

Officer Brock adds up the footprints counted along the sandy arena path to find a clue.

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



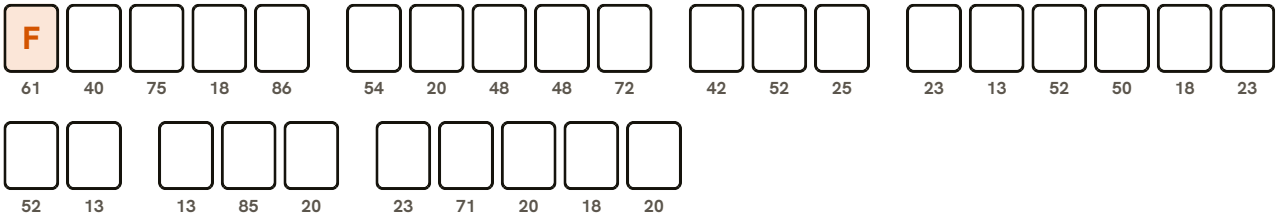
18 + 10 = ☐ → T	30 + 37 = ☐ → V	23 + 51 = ☐ → H
25 + 30 = ☐ → L	42 + 22 = ☐ → O	14 + 21 = ☐ → N
10 + 11 = ☐ → B	25 + 31 = ☐ → W	32 + 64 = ☐ → S
12 + 26 = ☐ → E	27 + 45 = ☐ → M	15 + 19 = ☐ → A
57 + 27 = ☐ → R	45 + 43 = ☐ → D	37 + 25 = ☐ → F
37 + 58 = ☐ → I		

Scratch space:

CLUE 3 Subtraction

Trainer Misty subtracts the missing creature treats to spot a leftover clue.

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



75 - 14 = ☐ → F

118 - 32 = ☐ → D

39 - 19 = ☐ → E

35 - 10 = ☐ → M

23 - 10 = ☐ → T

104 - 33 = ☐ → C

65 - 11 = ☐ → B

90 - 40 = ☐ → I

102 - 17 = ☐ → H

73 - 1 = ☐ → Y

52 - 10 = ☐ → J

86 - 34 = ☐ → A

50 - 27 = ☐ → S

51 - 11 = ☐ → O

59 - 11 = ☐ → R

53 - 35 = ☐ → N

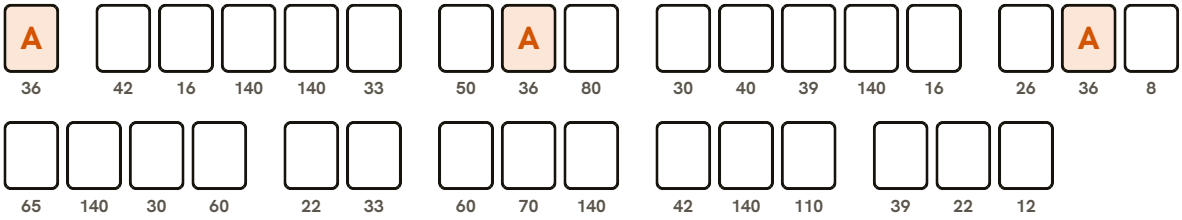
89 - 14 = ☐ → U

Scratch space:

CLUE 4 Skip counting

The security team skip counts rows of arena seats to locate a dropped clue.

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



Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, ___, 39, 42 ☐ → **A**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, ___, 45, 50 ☐ → **I**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, ___, 24, 26 ☐ → **O**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, ___, 150, 160 ☐ → **E**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, ___, 14, 16 ☐ → **X**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, ___, 42, 45 ☐ → **B**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, ___, 75, 80 ☐ → **H**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, ___, 60, 70 ☐ → **C**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, ___, 36, 39 ☐ → **N**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, ___, 45, 48 ☐ → **G**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, ___, 18, 20 ☐ → **R**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, ___, 120, 130 ☐ → **M**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, ___, 65, 70 ☐ → **T**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 ☐ → W

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, ___, 90, 100 ☐ → P

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, ___, 70, 75 ☐ → L

Skip-count by 10s. Fill the blank: 10, 20, ___, 40, 50 ☐ → F

Skip-count by 2s. Fill the blank: 2, 4, 6, ___, 10, 12 ☐ → S

Scratch space:

CLUE 5 Missing addends - the last clue

Professor Elm calculates missing battle points to uncover the final clue.

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:

10 + ___ = 20 ☐	6 + ___ = 9 ☐	7 + ___ = 12 ☐	7 + ___ = 9 ☐
8 + ___ = 16 ☐	9 + ___ = 13 ☐	2 + ___ = 3 ☐	5 + ___ = 12 ☐
4 + ___ = 15 ☐	3 + ___ = 9 ☐	3 + ___ = 12 ☐	

Step 2 - cross out the sentence with each answer:

1. The villain tangled the security gate with vines, then melted the vault display lock.
2. The villain dimmed the stadium spotlights, then sparked the electronic alarm system.
3. The villain dimmed the stadium spotlights, then dashed out the side tunnel.
4. The villain scorched the entry carpet, then froze the trophy case hinges.
5. The villain tangled the security gate with vines, then sparked the electronic alarm system.
6. The villain tangled the security gate with vines, then froze the trophy case hinges.
7. The villain flooded the locker room floor, then dashed out the side tunnel.
8. The villain zapped the main arena lights, then snatched the golden star gem.
9. The villain tangled the security gate with vines, then snatched the golden star gem.
10. The villain flooded the locker room floor, then froze the trophy case hinges.
11. The villain flooded the locker room floor, then melted the vault display lock.
12. The villain zapped the main arena lights, then sparked the electronic alarm system.

TEACHER / PARENT

Answer Key

The Case of the Missing Spark Gem

Culprit: Leona

Electric · Volt Belt · Left Handed · Green Cap · Berry Jam

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT WEAR A FLAME SHIELD"

What number has 4 tens and 2 ones? = 42 (T) · What number has 2 tens and 4 ones? = 24 (I) · What number has 6 tens and 7 ones? = 67 (H) · What number has 5 tens and 0 ones? = 50 (V) · What number has 7 tens and 4 ones? = 74 (E) · What number has 9 tens and 0 ones? = 90 (M) · What number has 1 ten and 3 ones? = 13 (N) · What number has 8 tens and 6 ones? = 86 (S) · What number has 6 tens and 2 ones? = 62 (R) · What number has 3 tens and 3 ones? = 33 (F) · What number has 9 tens and 4 ones? = 94 (O) · What number has 5 tens and 6 ones? = 56 (L) · What number has 3 tens and 0 ones? = 30 (D) · What number has 3 tens and 6 ones? = 36 (A) · What number has 1 ten and 4 ones? = 14 (W)

Clue 2 (Addition): "THE VILLAIN THROWS MONSTER BALLS LEFT HANDED"

18 + 10 = 28 (T) · 30 + 37 = 67 (V) · 23 + 51 = 74 (H) · 25 + 30 = 55 (L) · 42 + 22 = 64 (O) · 14 + 21 = 35 (N) · 10 + 11 = 21 (B) · 25 + 31 = 56 (W) · 32 + 64 = 96 (S) · 12 + 26 = 38 (E) · 27 + 45 = 72 (M) · 15 + 19 = 34 (A) · 57 + 27 = 84 (R) · 45 + 43 = 88 (D) · 37 + 25 = 62 (F) · 37 + 58 = 95 (I)

Clue 3 (Subtraction): "FOUND BERRY JAM STAINS AT THE SCENE"

75 - 14 = 61 (F) · 118 - 32 = 86 (D) · 39 - 19 = 20 (E) · 35 - 10 = 25 (M) · 23 - 10 = 13 (T) · 104 - 33 = 71 (C) · 65 - 11 = 54 (B) · 90 - 40 = 50 (I) · 102 - 17 = 85 (H) · 73 - 1 = 72 (Y) · 52 - 10 = 42 (J) · 86 - 34 = 52 (A) · 50 - 27 = 23 (S) · 51 - 11 = 40 (O) · 59 - 11 = 48 (R) · 53 - 35 = 18 (N) · 89 - 14 = 75 (U)

Clue 4 (Skip counting): "A GREEN CAP FIBER WAS LEFT ON THE GEM BOX"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, ___, 39, 42 = 36 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, ___, 45, 50 = 40 (I) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, ___, 24, 26 = 22 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, ___, 150, 160 = 140 (E) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, ___, 14, 16 = 12 (X) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, ___, 42, 45 = 39 (B) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, ___, 75, 80 = 70 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, ___, 60, 70 = 50 (C) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, ___, 36, 39 = 33 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, ___, 45, 48 = 42 (G) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, ___, 18, 20 = 16 (R) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, ___, 120, 130 = 110 (M) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, ___, 65, 70 = 60 (T) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 = 26 (W) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, ___, 90, 100 = 80 (P) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, ___, 70, 75 = 65 (L) · Skip-count by 10s. Fill the blank: 10, 20, ___, 40, 50 = 30 (F) · Skip-count by 2s. Fill the blank: 2, 4, 6, ___, 10, 12 = 8 (S)

Clue 5 (Missing addends): surviving statement is box 12 → Leona

10 + ___ = 20 = 10 · 6 + ___ = 9 = 3 · 7 + ___ = 12 = 5 · 7 + ___ = 9 = 2 · 8 + ___ = 16 = 8 · 9 + ___ = 13 = 4 · 2 + ___ = 3 = 1 · 5 + ___ = 12 = 7 · 4 + ___ = 15 = 11 · 3 + ___ = 9 = 6 · 3 + ___ = 12 = 9