



The Case of the Missing Paintbrush

Grade 3 math · Addition, Subtraction, Word problems, Rounding, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

The Golden Paintbrush has been snatched from the Rainbow Waterfall! The herd is in a huge panic because without it, the meadows will lose their color. A rogue unicorn did it. We need to find the thief before all the flowers turn gray!

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 unicorn is _____

Possible suspects

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

NAME	MAGIC BLAST	SPECIAL SKILL	HORSESHOE TYPE	MANE COLOR	SECRET WEAKNESS
Amethyst	glitter dash	sweet song	wears silver horseshoe	blue mane	sour berries
Barnaby	glitter dash	sweet song	wears gold horseshoe	blue mane	tickle grass
Luna	rainbow blast	mist summon	wears silver horseshoe	pink mane	tickle grass
Stardust	cloud float	speedy teleport	wears silver horseshoe	purple mane	sour berries
Twinkle	rainbow blast	levitating stones	wears gold horseshoe	blue mane	tickle grass
Comet	crystal grow	levitating stones	wears gold horseshoe	blue mane	tickle grass
Dawn	glitter dash	speedy teleport	wears silver horseshoe	blue mane	tickle grass
Trixie	star glow	sweet song	wears gold horseshoe	pink mane	tickle grass
Clara	star glow	mist summon	wears silver horseshoe	pink mane	tickle grass
Breezy	crystal grow	speedy teleport	wears gold horseshoe	purple mane	tickle grass
Celeste	cloud float	mist summon	wears silver horseshoe	blue mane	sour berries
Sunny	rainbow blast	bubble shield	wears gold horseshoe	blue mane	tickle grass
Buttercup	rainbow blast	levitating stones	wears silver horseshoe	purple mane	tickle grass
Prancer	star glow	speedy teleport	wears gold horseshoe	blue mane	tickle grass
Nova	rainbow blast	levitating stones	wears silver horseshoe	pink mane	sleepy music
Flora	star glow	sweet song	wears gold horseshoe	purple mane	sleepy music
Ziggy	star glow	levitating stones	wears gold horseshoe	purple mane	sour berries
Pip	rainbow blast	sweet song	wears gold horseshoe	blue mane	sleepy music
Pixie	cloud float	speedy teleport	wears silver horseshoe	purple mane	tickle grass
Jewel	rainbow blast	bubble shield	wears gold horseshoe	pink mane	tickle grass
Willa	star glow	bubble shield	wears gold horseshoe	purple mane	tickle grass

CLUE 1 Addition

The Pixie Patrol is counting the glitter berries left in the basket. Let us add up the total berries to uncover our first major clue.

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

T			T																
927	771	509	927	771	250	509	899	643	576	509	878	321	576	927	771	815	608	509	
815	806	961	806	806	475	509	878	771	250	509	475	643							

$352 + 575 = \square \rightarrow \boxed{\text{T}}$

$446 + 453 = \square \rightarrow \boxed{\text{F}}$

$495 + 466 = \square \rightarrow \boxed{\text{U}}$

$169 + 340 = \square \rightarrow \boxed{\text{E}}$

$134 + 116 = \square \rightarrow \boxed{\text{I}}$

$293 + 283 = \square \rightarrow \boxed{\text{O}}$

$223 + 385 = \square \rightarrow \boxed{\text{V}}$

$513 + 365 = \square \rightarrow \boxed{\text{S}}$

$330 + 476 = \square \rightarrow \boxed{\text{B}}$

$150 + 325 = \square \rightarrow \boxed{\text{L}}$

$101 + 220 = \square \rightarrow \boxed{\text{N}}$

$423 + 348 = \square \rightarrow \boxed{\text{H}}$

$265 + 378 = \square \rightarrow \boxed{\text{D}}$

$527 + 288 = \square \rightarrow \boxed{\text{A}}$

Scratch space:

CLUE 2 Subtraction

We had a big pile of magic horseshoe nails, but some fell into the river. Let us subtract the lost nails to find the next clue.

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

A																		
374	718	786	672	628	656	851	428	759	590	813	428	428	489	658	816	672	628	489

	A						A									
288	374	718	759	151	813	489	374	489	489	786	151	718	602	151	628	151

$610 - 236 = \square \rightarrow \mathbf{A}$	$739 - 21 = \square \rightarrow \mathbf{S}$	$1169 - 353 = \square \rightarrow \mathbf{R}$
$463 - 175 = \square \rightarrow \mathbf{W}$	$971 - 315 = \square \rightarrow \mathbf{Y}$	$696 - 94 = \square \rightarrow \mathbf{C}$
$544 - 393 = \square \rightarrow \mathbf{E}$	$892 - 106 = \square \rightarrow \mathbf{H}$	$969 - 341 = \square \rightarrow \mathbf{N}$
$987 - 174 = \square \rightarrow \mathbf{F}$	$903 - 245 = \square \rightarrow \mathbf{P}$	$990 - 318 = \square \rightarrow \mathbf{I}$
$837 - 78 = \square \rightarrow \mathbf{L}$	$774 - 285 = \square \rightarrow \mathbf{T}$	$827 - 399 = \square \rightarrow \mathbf{O}$
$1043 - 192 = \square \rightarrow \mathbf{G}$	$715 - 125 = \square \rightarrow \mathbf{D}$	

Scratch space:

CLUE 3

Word problems

A helpful little fairy needs us to solve a quick story puzzle about unicorn toys to reveal the next piece of evidence.

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

Someone scared the villain off with T R A S S .

36 32 8 78 56 47 41

The stable pixie lined up 4 rows of 9 sparkle carrots. How many sparkle carrots in all?

Answer: → T

There were 90 magic horseshoes. 34 were used up. How many magic horseshoes are left?

Answer: → L

The stable pixie lined up 4 rows of 2 magic horseshoes. How many magic horseshoes in all?

Answer: → C

The stable pixie found 12 sparkle carrots yesterday and 35 more today. How many sparkle carrots in all?

Answer: → E

The stable pixie found 10 rainbow crystals yesterday and 31 more today. How many rainbow crystals in all?

Answer: → G

The stable pixie lined up 8 rows of 4 rainbow crystals. How many rainbow crystals in all?

Answer: → I

There were 87 sparkle carrots. 9 were used up. How many sparkle carrots are left?

Answer: → K

Scratch space:

CLUE 4 Rounding

Our ancient crystal ball shows the distance to the thief, but it only shows numbers rounded to the nearest ten.
Round this number to see!

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

A						A					A			A			
700	600	80	900	200	6000	700	500	200	40	9000	30	200	700	8000	50	700	20
	A											A					
60	700	900	4000	9000	40	2000	500	40	9000	200	600	30	700	500	60	9000	

Round 727 to the nearest hundred → **A**

Round 34 to the nearest ten → **R**

Round 9,144 to the nearest thousand → **H**

Round 41 to the nearest ten → **T**

Round 6,443 to the nearest thousand → **M**

Round 81 to the nearest ten → **L**

Round 649 to the nearest hundred → **B**

Round 862 to the nearest hundred → **U**

Round 58 to the nearest ten → **C**

Round 49 to the nearest ten → **W**

Round 158 to the nearest hundred → **E**

Round 7,545 to the nearest thousand → **D**

Round 21 to the nearest ten → **S**

Round 4,397 to the nearest thousand → **G**

Round 1,999 to the nearest thousand → **O**

Round 457 to the nearest hundred → **N**

Scratch space:

CLUE 5**Missing addends - the last clue**

We need exactly fifteen sparkles to power up the magic tracking compass. Find the missing number of sparkles to reveal 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:

$8 + \underline{\quad} = 19$

$6 + \underline{\quad} = 18$

$3 + \underline{\quad} = 6$

$3 + \underline{\quad} = 9$

$9 + \underline{\quad} = 14$

$10 + \underline{\quad} = 19$

$1 + \underline{\quad} = 8$

$1 + \underline{\quad} = 9$

$1 + \underline{\quad} = 5$

$9 + \underline{\quad} = 19$

$10 + \underline{\quad} = 11$

Step 2 - cross out the sentence with each answer:

1. The villain creates a path of growing crystals, then teleports across the meadow.
2. The villain shoots a bright rainbow blast, then lifts up heavy river stones.
3. The villain makes their horn glow like a star, then teleports across the meadow.
4. The villain floats up high on a cloud, then creates a protective bubble.
5. The villain floats up high on a cloud, then teleports across the meadow.
6. The villain performs a super glitter dash, then teleports across the meadow.
7. The villain performs a super glitter dash, then summons a thick purple mist.
8. The villain floats up high on a cloud, then summons a thick purple mist.
9. The villain shoots a bright rainbow blast, then teleports across the meadow.
10. The villain creates a path of growing crystals, then creates a protective bubble.
11. The villain creates a path of growing crystals, then lifts up heavy river stones.
12. The villain performs a super glitter dash, then sings a beautiful sweet song.

Answer Key

The Case of the Missing Paintbrush

Culprit: Twinkle

rainbow blast · levitating stones · wears gold horseshoe · blue mane · tickle grass

Trail: Start 21 → Clue 1 18 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT HAVE A BUBBLE SHIELD"

$352 + 575 = 927$ (T) · $446 + 453 = 899$ (F) · $495 + 466 = 961$ (U) · $169 + 340 = 509$ (E) · $134 + 116 = 250$ (I) · $293 + 283 = 576$ (O) · $223 + 385 = 608$ (V) · $513 + 365 = 878$ (S) · $330 + 476 = 806$ (B) · $150 + 325 = 475$ (L) · $101 + 220 = 321$ (N) · $423 + 348 = 771$ (H) · $265 + 378 = 643$ (D) · $527 + 288 = 815$ (A)

Clue 2 (Subtraction): "A SHINY GOLD FOOTPRINT WAS LEFT AT THE SCENE"

$610 - 236 = 374$ (A) · $739 - 21 = 718$ (S) · $1169 - 353 = 816$ (R) · $463 - 175 = 288$ (W) · $971 - 315 = 656$ (Y) · $696 - 94 = 602$ (C) · $544 - 393 = 151$ (E) · $892 - 106 = 786$ (H) · $969 - 341 = 628$ (N) · $987 - 174 = 813$ (F) · $903 - 245 = 658$ (P) · $990 - 318 = 672$ (I) · $837 - 78 = 759$ (L) · $774 - 285 = 489$ (T) · $827 - 399 = 428$ (O) · $1043 - 192 = 851$ (G) · $715 - 125 = 590$ (D)

Clue 3 (Word problems): "TICKLE GRASS"

The stable pixie lined up 4 rows of 9 sparkle carrots. How many sparkle carrots in all? = 36 (T) · There were 90 magic horseshoes. 34 were used up. How many magic horseshoes are left? = 56 (L) · The stable pixie lined up 4 rows of 2 magic horseshoes. How many magic horseshoes in all? = 8 (C) · The stable pixie found 12 sparkle carrots yesterday and 35 more today. How many sparkle carrots in all? = 47 (E) · The stable pixie found 10 rainbow crystals yesterday and 31 more today. How many rainbow crystals in all? = 41 (G) · The stable pixie lined up 8 rows of 4 rainbow crystals. How many rainbow crystals in all? = 32 (I) · There were 87 sparkle carrots. 9 were used up. How many sparkle carrots are left? = 78 (K)

Clue 4 (Rounding): "A BLUE MANE THREAD WAS CAUGHT ON THE BRANCH"

Round 727 to the nearest hundred = 700 (A) · Round 34 to the nearest ten = 30 (R) · Round 9,144 to the nearest thousand = 9000 (H) · Round 41 to the nearest ten = 40 (T) · Round 6,443 to the nearest thousand = 6000 (M) · Round 81 to the nearest ten = 80 (L) · Round 649 to the nearest hundred = 600 (B) · Round 862 to the nearest hundred = 900 (U) · Round 58 to the nearest ten = 60 (C) · Round 49 to the nearest ten = 50 (W) · Round 158 to the nearest hundred = 200 (E) · Round 7,545 to the nearest thousand = 8000 (D) · Round 21 to the nearest ten = 20 (S) · Round 4,397 to the nearest thousand = 4000 (G) · Round 1,999 to the nearest thousand = 2000 (O) · Round 457 to the nearest hundred = 500 (N)

Clue 5 (Missing addends): surviving statement is box 2 → Twinkle

$8 + \underline{\quad} = 19 = 11$ · $6 + \underline{\quad} = 18 = 12$ · $3 + \underline{\quad} = 6 = 3$ · $3 + \underline{\quad} = 9 = 6$ · $9 + \underline{\quad} = 14 = 5$ · $10 + \underline{\quad} = 19 = 9$ · $1 + \underline{\quad} = 8 = 7$ · $1 + \underline{\quad} = 9 = 8$ · $1 + \underline{\quad} = 5 = 4$ · $9 + \underline{\quad} = 19 = 10$ · $10 + \underline{\quad} = 11 = 1$