



The Case of the Missing Sparkle Horn

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

Detective: _____ Date: _____

Oh no! The Grumble Goblin has snatched the Sparkle Sprite's magical horn! The woods are losing their shine. Only you can help track down the goblin and get the horn back!

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 Grumble Goblin is _____

Possible suspects

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

NAME	MAGICAL ABILITY	ACCESSORY	TRAIL MARK	MANE COLOR	FEARS
Leo	Rainbow Beam	Glittering Cape	Feather Droppings	Goldenrod Yellow	Sour Candy
Poppy	Rainbow Beam	Dreamcatcher Net	Hoof Prints	Sky Blue	Mud Puddles
Ruby	Song Magic	Dreamcatcher Net	Feather Droppings	Sky Blue	Loud Noises
Chloe	Cloud Walking	Sunbeam Shoes	Hoof Prints	Sky Blue	Sour Candy
Jasper	Cloud Walking	Wishing Wand	Feather Droppings	Goldenrod Yellow	Sour Candy
Lily	Crystal Vision	Moonstone Amulet	Hoof Prints	Goldenrod Yellow	Loud Noises
Henry	Song Magic	Wishing Wand	Feather Droppings	Goldenrod Yellow	Mud Puddles
Lucas	Star Dust	Moonstone Amulet	Feather Droppings	Goldenrod Yellow	Loud Noises
Noah	Cloud Walking	Glittering Cape	Hoof Prints	Goldenrod Yellow	Loud Noises
Zoe	Cloud Walking	Dreamcatcher Net	Feather Droppings	Goldenrod Yellow	Sour Candy
Mia	Song Magic	Sunbeam Shoes	Hoof Prints	Sky Blue	Loud Noises
Daisy	Star Dust	Glittering Cape	Feather Droppings	Sky Blue	Sour Candy
Sam	Crystal Vision	Moonstone Amulet	Hoof Prints	Sky Blue	Sour Candy
Finn	Crystal Vision	Wishing Wand	Feather Droppings	Goldenrod Yellow	Sour Candy
Liam	Star Dust	Moonstone Amulet	Hoof Prints	Goldenrod Yellow	Sour Candy
Ethan	Rainbow Beam	Moonstone Amulet	Feather Droppings	Sky Blue	Mud Puddles
Robin	Song Magic	Sunbeam Shoes	Feather Droppings	Sky Blue	Sour Candy
Isabella	Star Dust	Sunbeam Shoes	Feather Droppings	Goldenrod Yellow	Mud Puddles
Ava	Song Magic	Sunbeam Shoes	Feather Droppings	Goldenrod Yellow	Sour Candy
Sophia	Star Dust	Moonstone Amulet	Hoof Prints	Sky Blue	Loud Noises
Maya	Song Magic	Moonstone Amulet	Hoof Prints	Cotton Candy Pink	Sour Candy

CLUE 1 Place value

The detective found a note. It listed the items the Grumble Goblin took from his lair. To know which item was NOT taken, you have to read the list carefully.

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

T																			
63	95	18	32	71	68	72	38	50	18	32	89	38	50	16	59	17	89	18	84
		T													T				
59	89	63	95	22	67	18	22	17	71	18	22	72	43	22	63	43	95	18	71
		T																	
59	18	63																	

What number has 6 tens and 3 ones? → **T**

What number has 9 tens and 5 ones? → **H**

What number has 3 tens and 8 ones? → **B**

What number has 6 tens and 8 ones? → **U**

What number has 6 tens and 7 ones? → **V**

What number has 7 tens and 1 one? → **R**

What number has 1 ten and 7 ones? → **D**

What number has 7 tens and 2 ones? → **M**

What number has 3 tens and 2 ones? → **G**

What number has 5 tens and 0 ones? → **L**

What number has 4 tens and 3 ones? → **C**

What number has 8 tens and 9 ones? → **O**

What number has 1 ten and 6 ones? → **I**

What number has 5 tens and 9 ones? → **N**

What number has 2 tens and 2 ones? → **A**

What number has 8 tens and 4 ones? → **S**

What number has 1 ten and 8 ones? → **E**

Scratch space:

CLUE 2

Word problems

The Grumble Goblin left a messy trail! The detective counted his steps in each section of the woods. To figure out where he went next, look at the place value of his step counts.

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

A witness saw the villain was

F										O	P	P	I	N	G	S	.
19	9	6	30	8	9	12	13	12									

There were 25 glowing mushrooms. 6 were used up. How many glowing mushrooms are left?

Answer: → **F**

Pixie found 10 glowing mushrooms yesterday and 2 more today. How many glowing mushrooms in all?

Answer: → **R**

Pixie lined up 3 rows of 2 shiny pebbles. How many shiny pebbles in all?

Answer: → **A**

Pixie lined up 4 rows of 2 magic berries. How many magic berries in all?

Answer: → **H**

There were 16 magic berries. 3 were used up. How many magic berries are left?

Answer: → **D**

Pixie lined up 5 rows of 6 magic berries. How many magic berries in all?

Answer: → **T**

There were 14 magic berries. 5 were used up. How many magic berries are left?

Answer: → **E**

Scratch space:

CLUE 3 Addition

The Sparkle Sprites were trying to gather moonbeams to help light the path. They counted how many they had. You need to add their moonbeams together to see the total.

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

T																	
93	86	82	56	60	51	83	34	71	68	82	74	60	34	83	82	41	
						T			T								
77	68	60	33	96	93	96	52	93	82	60	77	52	60	92	68		
83	82	33	60	71	41	68	60	67									

$35 + 58 = \square \rightarrow$ T	$23 + 18 = \square \rightarrow$ D	$31 + 55 = \square \rightarrow$ H
$28 + 23 = \square \rightarrow$ B	$34 + 43 = \square \rightarrow$ F	$34 + 22 = \square \rightarrow$ G
$30 + 41 = \square \rightarrow$ N	$31 + 51 = \square \rightarrow$ E	$45 + 22 = \square \rightarrow$ P
$65 + 27 = \square \rightarrow$ U	$39 + 21 = \square \rightarrow$ O	$44 + 24 = \square \rightarrow$ R
$50 + 33 = \square \rightarrow$ L	$23 + 51 = \square \rightarrow$ C	$36 + 16 = \square \rightarrow$ S
$10 + 24 = \square \rightarrow$ I	$12 + 21 = \square \rightarrow$ M	$40 + 56 = \square \rightarrow$ A

Scratch space:

CLUE 4
Subtraction

The Grumble Goblin was so sneaky! He tried to hide some of his sparkly treasures. The detective found a pile, but some of them were gone. You need to subtract to find out how many were left.

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

A														A		
84	59	56	27	59	46	27	65	50	85	85	46	33	25	84	14	83
	A								A							
33	84	68	68	59	56	40	78	59	46	84	63	56	68	25	83	46

$113 - 29 = \square \rightarrow \boxed{\text{A}}$

$75 - 29 = \square \rightarrow \boxed{\text{O}}$

$53 - 28 = \square \rightarrow \boxed{\text{H}}$

$40 - 7 = \square \rightarrow \boxed{\text{W}}$

$97 - 14 = \square \rightarrow \boxed{\text{R}}$

$123 - 38 = \square \rightarrow \boxed{\text{L}}$

$59 - 9 = \square \rightarrow \boxed{\text{E}}$

$70 - 5 = \square \rightarrow \boxed{\text{Y}}$

$62 - 22 = \square \rightarrow \boxed{\text{C}}$

$85 - 22 = \square \rightarrow \boxed{\text{M}}$

$83 - 24 = \square \rightarrow \boxed{\text{T}}$

$31 - 4 = \square \rightarrow \boxed{\text{F}}$

$81 - 3 = \square \rightarrow \boxed{\text{K}}$

$72 - 16 = \square \rightarrow \boxed{\text{U}}$

$23 - 9 = \square \rightarrow \boxed{\text{I}}$

$108 - 40 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

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

The Pixies were helping to count the magical dew drops. They knew how many they had at first and how many they have now. You need to find the missing number of dew drops they collected.

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:

$6 + \underline{\quad} = 9$

$8 + \underline{\quad} = 15$

$3 + \underline{\quad} = 14$

$7 + \underline{\quad} = 15$

$8 + \underline{\quad} = 14$

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

$6 + \underline{\quad} = 11$

$5 + \underline{\quad} = 9$

$3 + \underline{\quad} = 12$

$10 + \underline{\quad} = 12$

$3 + \underline{\quad} = 13$

Step 2 - cross out the sentence with each answer:

1. The villain hid behind a mushroom, then lost his hat.
2. The villain tripped on a root, then left a trail of crumbs.
3. The villain tiptoed over a log, then tied his shoelaces together.
4. The villain tiptoed over a log, then forgot his lunchbox.
5. The villain tripped on a root, then lost his hat.
6. The villain raced through the brambles, then forgot his lunchbox.
7. The villain hopped over a stream, then left a trail of crumbs.
8. The villain tripped on a root, then dropped his map.
9. The villain hid behind a mushroom, then dropped his map.
10. The villain hopped over a stream, then tied his shoelaces together.
11. The villain raced through the brambles, then tied his shoelaces together.
12. The villain raced through the brambles, then dropped his map.

Answer Key

The Case of the Missing Sparkle Horn

Culprit: Leo

Rainbow Beam · Glittering Cape · Feather Droppings · Goldenrod Yellow · Sour Candy

Trail: Start 21 → Clue 1 18 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE GRUMBLE GOBLIN DOES NOT HAVE A DREAMCATCHER NET"

What number has 6 tens and 3 ones? = 63 (T) · What number has 9 tens and 5 ones? = 95 (H) · What number has 3 tens and 8 ones? = 38 (B) · What number has 6 tens and 8 ones? = 68 (U) · What number has 6 tens and 7 ones? = 67 (V) · What number has 7 tens and 1 one? = 71 (R) · What number has 1 ten and 7 ones? = 17 (D) · What number has 7 tens and 2 ones? = 72 (M) · What number has 3 tens and 2 ones? = 32 (G) · What number has 5 tens and 0 ones? = 50 (L) · What number has 4 tens and 3 ones? = 43 (C) · What number has 8 tens and 9 ones? = 89 (O) · What number has 1 ten and 6 ones? = 16 (I) · What number has 5 tens and 9 ones? = 59 (N) · What number has 2 tens and 2 ones? = 22 (A) · What number has 8 tens and 4 ones? = 84 (S) · What number has 1 ten and 8 ones? = 18 (E)

Clue 2 (Word problems): "FEATHER DROPPINGS"

There were 25 glowing mushrooms. 6 were used up. How many glowing mushrooms are left? = 19 (F) · Pixie found 10 glowing mushrooms yesterday and 2 more today. How many glowing mushrooms in all? = 12 (R) · Pixie lined up 3 rows of 2 shiny pebbles. How many shiny pebbles in all? = 6 (A) · Pixie lined up 4 rows of 2 magic berries. How many magic berries in all? = 8 (H) · There were 16 magic berries. 3 were used up. How many magic berries are left? = 13 (D) · Pixie lined up 5 rows of 6 magic berries. How many magic berries in all? = 30 (T) · There were 14 magic berries. 5 were used up. How many magic berries are left? = 9 (E)

Clue 3 (Addition): "THE GOBLIN RECOILED FROM A TASTE OF SOUR LEMON DROP"

$35 + 58 = 93$ (T) · $23 + 18 = 41$ (D) · $31 + 55 = 86$ (H) · $28 + 23 = 51$ (B) · $34 + 43 = 77$ (F) · $34 + 22 = 56$ (G) · $30 + 41 = 71$ (N) · $31 + 51 = 82$ (E) · $45 + 22 = 67$ (P) · $65 + 27 = 92$ (U) · $39 + 21 = 60$ (O) · $44 + 24 = 68$ (R) · $50 + 33 = 83$ (L) · $23 + 51 = 74$ (C) · $36 + 16 = 52$ (S) · $10 + 24 = 34$ (I) · $12 + 21 = 33$ (M) · $40 + 56 = 96$ (A)

Clue 4 (Subtraction): "A TUFT OF YELLOW HAIR WAS STUCK TO A MUSHROOM"

$113 - 29 = 84$ (A) · $75 - 29 = 46$ (O) · $53 - 28 = 25$ (H) · $40 - 7 = 33$ (W) · $97 - 14 = 83$ (R) · $123 - 38 = 85$ (L) · $59 - 9 = 50$ (E) · $70 - 5 = 65$ (Y) · $62 - 22 = 40$ (C) · $85 - 22 = 63$ (M) · $83 - 24 = 59$ (T) · $31 - 4 = 27$ (F) · $81 - 3 = 78$ (K) · $72 - 16 = 56$ (U) · $23 - 9 = 14$ (I) · $108 - 40 = 68$ (S)

Clue 5 (Missing addends): surviving statement is box 1 → Leo

$6 + \underline{\quad} = 9 = 3$ · $8 + \underline{\quad} = 15 = 7$ · $3 + \underline{\quad} = 14 = 11$ · $7 + \underline{\quad} = 15 = 8$ · $8 + \underline{\quad} = 14 = 6$ · $6 + \underline{\quad} = 18 = 12$ · $6 + \underline{\quad} = 11 = 5$ · $5 + \underline{\quad} = 9 = 4$ · $3 + \underline{\quad} = 12 = 9$ · $10 + \underline{\quad} = 12 = 2$ · $3 + \underline{\quad} = 13 = 10$