

The Case of the Missing Rainbow Crown

Grade 2 math · Addition, Subtraction, Place value, Skip counting, Missing addends · Reading level grades 1-2

Detective: _____ Date: _____

Oh no! The magical Rainbow Crown is missing from the Great Crystal Tree. Star the Pixie needs your help to find which unicorn 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 crafty 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 POWER	LUCKY ACCESSORY	WRITING HOOF	MANE STYLE	DISLIKE
Twinkle	Rainbow bridge	Star cape	Left-hoofed	Pink mane	Sour apples
Pearl	Rainbow bridge	Glow collar	Left-hoofed	Blue mane	Sticky mud
Melody	Sparkle blast	Ribbon bow	Right-hoofed	Pink mane	Sour apples
Breeze	Cloud walking	Golden shoe	Left-hoofed	Pink mane	Sour apples
Daisy	Flower bloom	Ribbon bow	Left-hoofed	Blue mane	Sour apples
Whisper	Sparkle blast	Star cape	Right-hoofed	Pink mane	Sour apples
Clover	Cloud walking	Glow collar	Left-hoofed	Blue mane	Cold rain
Dawn	Sparkle blast	Glow collar	Left-hoofed	Pink mane	Sticky mud
Crystal	Cloud walking	Magic tiara	Left-hoofed	Pink mane	Sticky mud
Luna	Cloud walking	Ribbon bow	Left-hoofed	Pink mane	Sour apples
Jewel	Sparkle blast	Glow collar	Left-hoofed	Pink mane	Sour apples
Angel	Flower bloom	Star cape	Right-hoofed	Gold mane	Sour apples
Rosie	Glitter storm	Star cape	Right-hoofed	Pink mane	Cold rain
Sky	Cloud walking	Ribbon bow	Left-hoofed	Blue mane	Sour apples
Sunny	Sparkle blast	Glow collar	Right-hoofed	Blue mane	Cold rain
Bella	Rainbow bridge	Golden shoe	Left-hoofed	Blue mane	Sour apples
Misty	Cloud walking	Golden shoe	Right-hoofed	Pink mane	Sticky mud
Sparkles	Cloud walking	Magic tiara	Left-hoofed	Blue mane	Sour apples
Buttercup	Glitter storm	Magic tiara	Right-hoofed	Pink mane	Sour apples
Blossom	Cloud walking	Glow collar	Right-hoofed	Blue mane	Sticky mud
Nova	Rainbow bridge	Glow collar	Left-hoofed	Pink mane	Sour apples

CLUE 1 Addition

We count the glitter apples on the ground. Let us add the red ones and the green ones together.

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

T																	T
43	58	93	91	45	96	96	89	45	67	56	72	93	26	67	72	43	

48	93	89	75	89	66	72	96	56	93	67	26	58	72	93

$31 + 12 = \boxed{} \rightarrow \boxed{\text{T}}$

$51 + 42 = \boxed{} \rightarrow \boxed{\text{E}}$

$38 + 34 = \boxed{} \rightarrow \boxed{\text{O}}$

$29 + 37 = \boxed{} \rightarrow \boxed{\text{G}}$

$20 + 38 = \boxed{} \rightarrow \boxed{\text{H}}$

$17 + 39 = \boxed{} \rightarrow \boxed{\text{D}}$

$17 + 31 = \boxed{} \rightarrow \boxed{\text{W}}$

$65 + 31 = \boxed{} \rightarrow \boxed{\text{L}}$

$41 + 26 = \boxed{} \rightarrow \boxed{\text{N}}$

$27 + 62 = \boxed{} \rightarrow \boxed{\text{A}}$

$14 + 12 = \boxed{} \rightarrow \boxed{\text{S}}$

$33 + 58 = \boxed{} \rightarrow \boxed{\text{V}}$

$50 + 25 = \boxed{} \rightarrow \boxed{\text{R}}$

$29 + 16 = \boxed{} \rightarrow \boxed{\text{I}}$

Scratch space:

Subtraction

Some sweet rainbow carrots are gone from the garden. We take away the eaten ones to find the rest.

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

Diagram illustrating the sequence of boxes and their associated numbers, with 'T' markers indicating specific points of interest.

Row 1: 30 (T), 60, 33, 45, 39, 45, 84, 33, 20, 30 (T), 29, 28, 61, 30 (T), 33, 45, 29, 61, 30 (T), 60.

Row 2: 30 (T), 60, 33, 61, 28, 51, 33, 79, 30 (T), 60, 19, 19, 79.

$52 - 22 = \boxed{} \rightarrow \boxed{\text{T}}$

$115 - 31 = \boxed{} \rightarrow \boxed{\text{P}}$

$37 - 9 = \boxed{} \rightarrow \boxed{\text{R}}$

$98 - 37 = \boxed{} \rightarrow \boxed{}$

$$67 - 34 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$90 - 39 = \boxed{} \rightarrow \boxed{\text{L}}$$

$41 - 21 = \boxed{} \rightarrow \boxed{\text{C}}$

$$53 - 14 = \boxed{} \rightarrow \boxed{\mathbf{U}}$$

$$67 - 38 = \boxed{} \rightarrow \boxed{\text{W}}$$

$83 - 23 = \boxed{} \rightarrow \boxed{\text{H}}$

$49 - 4 = \boxed{} \rightarrow \boxed{\text{S}}$

$110 - 31 = \boxed{} \rightarrow \boxed{\text{F}}$

$39 - 20 = \boxed{} \rightarrow \boxed{0}$

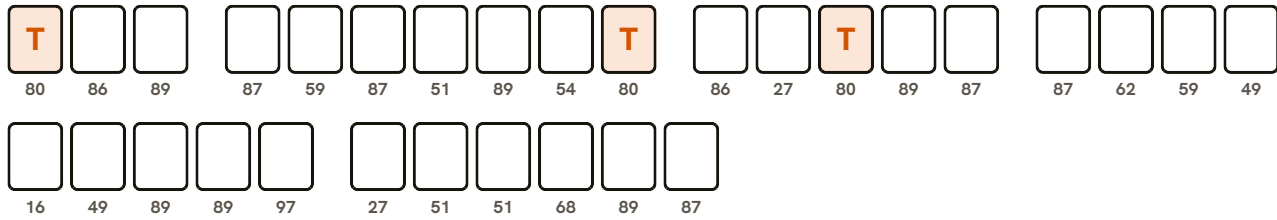
Scratch space:

CLUE 3

Place value

The magic chest has a lock. We must count the tens and ones blocks to open it.

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



What number has 8 tens and 0 ones?

→ **T**

What number has 5 tens and 9 ones?

→ **U**

What number has 8 tens and 9 ones?

→ **E**

What number has 2 tens and 7 ones?

→ **A**

What number has 6 tens and 8 ones?

→ **L**

What number has 8 tens and 6 ones?

→ **H**

What number has 9 tens and 7 ones?

→ **N**

What number has 5 tens and 1 one?

→ **P**

What number has 5 tens and 4 ones?

→ **C**

What number has 1 ten and 6 ones?

→ **G**

What number has 6 tens and 2 ones?

→ **O**

What number has 8 tens and 7 ones?

→ **S**

What number has 4 tens and 9 ones?

→ **R**

Scratch space:

CLUE 4 Skip counting

The crafty unicorn left hoofprints on the path. We must skip count by fives to follow them.

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

W																
24	45	14	100	9	42	140	25	20	65	50	42	140	25	100	14	50

35	65	8	55	10	20	80	8	42	26	33	50	42	45

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 → **W**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 → **E**

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

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 → **H**

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

Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 → **I**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 → **S**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 → **A**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 → **G**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 → **F**

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 → **O**

Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 → **T**

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

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **U**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 → **B**

Scratch space:

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

We need ten shiny ribbons to make a ladder. We have six. Let us find how many more we need.

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:

$7 + \underline{\quad} = 18$

$3 + \underline{\quad} = 7$

$9 + \underline{\quad} = 17$

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

$4 + \underline{\quad} = 14$

$4 + \underline{\quad} = 11$

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

$6 + \underline{\quad} = 8$

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

$8 + \underline{\quad} = 20$

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

Step 2 - cross out the sentence with each answer:

1. The villain steps softly across a cloud, then ties a pretty ribbon bow.
2. The villain shoots a bright sparkle blast, then polishes a bright golden shoe.
3. The villain conjures a wild glitter storm, then lights up their glow collar.
4. The villain makes a glowing rainbow bridge, then lights up their glow collar.
5. The villain makes a ring of flowers bloom, then adjusts their pink magic tiara.
6. The villain conjures a wild glitter storm, then adjusts their pink magic tiara.
7. The villain makes a ring of flowers bloom, then ties a pretty ribbon bow.
8. The villain makes a glowing rainbow bridge, then puts on a shiny star cape.
9. The villain steps softly across a cloud, then lights up their glow collar.
10. The villain makes a glowing rainbow bridge, then polishes a bright golden shoe.
11. The villain shoots a bright sparkle blast, then lights up their glow collar.
12. The villain makes a glowing rainbow bridge, then adjusts their pink magic tiara.

Answer Key

The Case of the Missing Rainbow Crown

Culprit: Luna

Cloud walking · Ribbon bow · Left-hoofed · Pink mane · Sour apples

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT WEAR A GOLDEN SHOE"

$31 + 12 = 43$ (T) · $51 + 42 = 93$ (E) · $38 + 34 = 72$ (O) · $29 + 37 = 66$ (G) · $20 + 38 = 58$ (H) · $17 + 39 = 56$ (D) · $17 + 31 = 48$ (W) · $65 + 31 = 96$ (L) · $41 + 26 = 67$ (N) · $27 + 62 = 89$ (A) · $14 + 12 = 26$ (S) · $33 + 58 = 91$ (V) · $50 + 25 = 75$ (R) · $29 + 16 = 45$ (I)

Clue 2 (Subtraction): "THE SUSPECT WRITES WITH THEIR LEFT HOOF"

$52 - 22 = 30$ (T) · $115 - 31 = 84$ (P) · $37 - 9 = 28$ (R) · $98 - 37 = 61$ (I) · $67 - 34 = 33$ (E) · $90 - 39 = 51$ (L) · $41 - 21 = 20$ (C) · $53 - 14 = 39$ (U) · $67 - 38 = 29$ (W) · $83 - 23 = 60$ (H) · $49 - 4 = 45$ (S) · $110 - 31 = 79$ (F) · $39 - 20 = 19$ (O)

Clue 3 (Place value): "THE SUSPECT HATES SOUR GREEN APPLES"

What number has 8 tens and 0 ones? = 80 (T) · What number has 5 tens and 9 ones? = 59 (U) · What number has 8 tens and 9 ones? = 89 (E) · What number has 2 tens and 7 ones? = 27 (A) · What number has 6 tens and 8 ones? = 68 (L) · What number has 8 tens and 6 ones? = 86 (H) · What number has 9 tens and 7 ones? = 97 (N) · What number has 5 tens and 1 one? = 51 (P) · What number has 5 tens and 4 ones? = 54 (C) · What number has 1 ten and 6 ones? = 16 (G) · What number has 6 tens and 2 ones? = 62 (O) · What number has 8 tens and 7 ones? = 87 (S) · What number has 4 tens and 9 ones? = 49 (R)

Clue 4 (Skip counting): "WE FOUND STRANDS OF A BRIGHT PINK MANE"

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

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

$7 + \underline{\quad} = 18 = 11$ · $3 + \underline{\quad} = 7 = 4$ · $9 + \underline{\quad} = 17 = 8$ · $3 + \underline{\quad} = 6 = 3$ · $4 + \underline{\quad} = 14 = 10$ · $4 + \underline{\quad} = 11 = 7$ · $10 + \underline{\quad} = 19 = 9$ · $6 + \underline{\quad} = 8 = 2$ · $9 + \underline{\quad} = 14 = 5$ · $8 + \underline{\quad} = 20 = 12$ · $8 + \underline{\quad} = 14 = 6$