



The Starlight Horn Mystery

Grade 5 math · Rounding, Skip counting, Word problems, Fractions of a number, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

During the annual Solstice Glow Celebration, someone snuck into the Crystal Spire and stole the sacred Starlight Orb! Without it, the rainbow bridges across Starhaven will fade away. The Unicorn Guard has gathered clues to catch the culprit before dawn.

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 glitter thief is _____

Possible suspects

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

NAME	HORN SPELL	ENCHANTED GEAR	DOMINANT HOOF	MANE COLOR	ALLERGY
Marigold	Cloud Dash	Glitter Wings	Left Hooved	Golden Yellow Mane	Sour Lemon
Willow	Glimmer Burst	Glitter Wings	Left Hooved	Neon Pink Mane	Crushed Marshmallow
Twinkle	Glimmer Burst	Star Bridle	Left Hooved	Cobalt Blue Mane	Crushed Marshmallow
Nova	Glimmer Burst	Glitter Wings	Right Hooved	Cobalt Blue Mane	Sour Lemon
Blossom	Cloud Dash	Star Bridle	Right Hooved	Cobalt Blue Mane	Sour Lemon
Sapphire	Starlight Shield	Star Bridle	Right Hooved	Cobalt Blue Mane	Sour Lemon
Radiant	Rainbow Beam	Crystal Bell	Right Hooved	Neon Pink Mane	Sour Lemon
Sparkles	Glimmer Burst	Silver Saddle	Right Hooved	Neon Pink Mane	Fresh Peppermint
Glitterwing	Starlight Shield	Crystal Bell	Left Hooved	Golden Yellow Mane	Sour Lemon
Penelope	Glimmer Burst	Moonstone Cape	Right Hooved	Cobalt Blue Mane	Sour Lemon
Pippin	Prism Wave	Crystal Bell	Right Hooved	Cobalt Blue Mane	Fresh Peppermint
Barnaby	Prism Wave	Crystal Bell	Left Hooved	Neon Pink Mane	Sour Lemon
Sunny	Starlight Shield	Glitter Wings	Left Hooved	Cobalt Blue Mane	Sour Lemon
Zephyr	Glimmer Burst	Moonstone Cape	Right Hooved	Neon Pink Mane	Sour Lemon
Starlight	Rainbow Beam	Moonstone Cape	Left Hooved	Neon Pink Mane	Fresh Peppermint
Echo	Prism Wave	Star Bridle	Left Hooved	Cobalt Blue Mane	Sour Lemon
Sterling	Glimmer Burst	Moonstone Cape	Left Hooved	Neon Pink Mane	Fresh Peppermint
Felix	Cloud Dash	Glitter Wings	Left Hooved	Golden Yellow Mane	Fresh Peppermint
Jasper	Glimmer Burst	Star Bridle	Right Hooved	Cobalt Blue Mane	Fresh Peppermint
Celeste	Prism Wave	Silver Saddle	Left Hooved	Cobalt Blue Mane	Sour Lemon
Clover	Starlight Shield	Silver Saddle	Right Hooved	Cobalt Blue Mane	Sour Lemon

CLUE 1 Rounding

The sensor array at the Starfall Gate rounded the magical energy surge to determine which entry point was breached.

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

T			T										T					
200	2000	50	200	2000	900	50	7000	70	900	70	2900	90	200	1700	50	300	130	300
					T													
4300	90	90	2900	170	200	90	2900	50	1300	300	9000	50						

Round 206 to the nearest hundred → **T**

Round 92 to the nearest ten → **O**

Round 170 to the nearest ten → **S**

Round 932 to the nearest hundred → **I**

Round 2,920 to the nearest hundred → **N**

Round 6,578 to the nearest thousand → **F**

Round 4,296 to the nearest hundred → **M**

Round 2,251 to the nearest thousand → **H**

Round 274 to the nearest hundred → **A**

Round 50 to the nearest ten → **E**

Round 9,319 to the nearest thousand → **P**

Round 1,313 to the nearest hundred → **C**

Round 72 to the nearest ten → **D**

Round 129 to the nearest ten → **R**

Round 1,660 to the nearest hundred → **W**

Scratch space:

CLUE 2 Skip counting

To track the getaway trail across the Cloud Bridge, you count the glowing hoofprints pattern step by step.

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

T					T														
120	27	100	70	90	120	130	100	8	8	8	22	70	22	120	26	22	18	65	
10	26	20	14	22	26	90	24	27	120	27	20	20	10						

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 → **T**

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

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 → **I**

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

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, __, 21, 24 → **C**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **H**

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

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 → **N**

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

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

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

Scratch space:

CLUE 3

Word problems

The meadow guards tallied up the scattered magic items left near the three pasture glades.

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

Someone scared the villain off with S N .

16 77 7 11 68 89 14 77

Meadow Guard lined up 2 rows of 8 sugar cubes. How many sugar cubes in all?

Answer: → S

Meadow Guard found 5 rainbow berries yesterday and 2 more today. How many rainbow berries in all?

Answer: → U

Meadow Guard found 33 sugar cubes yesterday and 56 more today. How many sugar cubes in all?

Answer: → E

Meadow Guard lined up 2 rows of 7 star petals. How many star petals in all?

Answer: → M

There were 46 rainbow berries. 35 were used up. How many rainbow berries are left?

Answer: → R

Meadow Guard found 42 rainbow berries yesterday and 35 more today. How many rainbow berries in all?

Answer: → O

There were 75 star petals. 7 were used up. How many star petals are left?

Answer: → L

Scratch space:

CLUE 4
Fractions of a number

Analyzing the leftover potion in the Star Vault reveals what fraction of the magic supply was taken.

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

A				A										
27	21	20	32	27	13	10	32	13	31	25	9	27	15	2

			A				A							
11	10	2	27	14	36	18	27	11	36	2	20	35	35	25

$1/5 \text{ of } 135 = \square \rightarrow \text{A}$

$2/10 \text{ of } 180 = \square \rightarrow \text{D}$

$5/10 \text{ of } 40 = \square \rightarrow \text{O}$

$2/3 \text{ of } 48 = \square \rightarrow \text{B}$

$1/3 \text{ of } 45 = \square \rightarrow \text{I}$

$4/8 \text{ of } 50 = \square \rightarrow \text{E}$

$2/6 \text{ of } 30 = \square \rightarrow \text{T}$

$6/8 \text{ of } 24 = \square \rightarrow \text{W}$

$1/6 \text{ of } 12 = \square \rightarrow \text{R}$

$5/6 \text{ of } 42 = \square \rightarrow \text{P}$

$1/6 \text{ of } 186 = \square \rightarrow \text{U}$

$1/6 \text{ of } 78 = \square \rightarrow \text{L}$

$1/2 \text{ of } 28 = \square \rightarrow \text{N}$

$1/4 \text{ of } 36 = \square \rightarrow \text{H}$

$2/10 \text{ of } 105 = \square \rightarrow \text{C}$

$1/2 \text{ of } 22 = \square \rightarrow \text{S}$

Scratch space:

CLUE 5**Division facts (1-12) - the last clue**

To narrow down the suspect list, the royal council divided the patrol logs evenly among the investigators.

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:

$22 \div 2 = \boxed{}$

$36 \div 9 = \boxed{}$

$11 \div 11 = \boxed{}$

$50 \div 10 = \boxed{}$

$72 \div 9 = \boxed{}$

$14 \div 2 = \boxed{}$

$27 \div 9 = \boxed{}$

$99 \div 11 = \boxed{}$

$2 \div 1 = \boxed{}$

$50 \div 5 = \boxed{}$

$144 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain performed a cloud dash, then tightened a star bridle.
2. The villain raised a starlight shield, then flapped glitter wings.
3. The villain summoned a prism wave, then draped a moonstone cape.
4. The villain triggered a glimmer burst, then flapped glitter wings.
5. The villain raised a starlight shield, then rang a crystal bell.
6. The villain raised a starlight shield, then adjusted a silver saddle.
7. The villain performed a cloud dash, then adjusted a silver saddle.
8. The villain fired a rainbow beam, then tightened a star bridle.
9. The villain summoned a prism wave, then flapped glitter wings.
10. The villain fired a rainbow beam, then adjusted a silver saddle.
11. The villain raised a starlight shield, then tightened a star bridle.
12. The villain performed a cloud dash, then rang a crystal bell.

Answer Key

The Starlight Horn Mystery

Culprit: Clover

Starlight Shield · Silver Saddle · Right Hooved · Cobalt Blue Mane · Sour Lemon

Trail: Start 21 → Clue 1 17 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE THIEF DID NOT WEAR A MOONSTONE CAPE"

Round 206 to the nearest hundred = 200 (T) · Round 92 to the nearest ten = 90 (O) · Round 170 to the nearest ten = 170 (S) · Round 932 to the nearest hundred = 900 (I) · Round 2,920 to the nearest hundred = 2900 (N) · Round 6,578 to the nearest thousand = 7000 (F) · Round 4,296 to the nearest hundred = 4300 (M) · Round 2,251 to the nearest thousand = 2000 (H) · Round 274 to the nearest hundred = 300 (A) · Round 50 to the nearest ten = 50 (E) · Round 9,319 to the nearest thousand = 9000 (P) · Round 1,313 to the nearest hundred = 1300 (C) · Round 72 to the nearest ten = 70 (D) · Round 129 to the nearest ten = 130 (R) · Round 1,660 to the nearest hundred = 1700 (W)

Clue 2 (Skip counting): "THE WITNESS SAW A TRACK FROM A RIGHT HOOF"

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

Clue 3 (Word problems): "SOUR LEMON"

Meadow Guard lined up 2 rows of 8 sugar cubes. How many sugar cubes in all? = 16 (S) · Meadow Guard found 5 rainbow berries yesterday and 2 more today. How many rainbow berries in all? = 7 (U) · Meadow Guard found 33 sugar cubes yesterday and 56 more today. How many sugar cubes in all? = 89 (E) · Meadow Guard lined up 2 rows of 7 star petals. How many star petals in all? = 14 (M) · There were 46 rainbow berries. 35 were used up. How many rainbow berries are left? = 11 (R) · Meadow Guard found 42 rainbow berries yesterday and 35 more today. How many rainbow berries in all? = 77 (O) · There were 75 star petals. 7 were used up. How many star petals are left? = 68 (L)

Clue 4 (Fractions of a number): "A COBALT BLUE HAIR STRAND WAS DROPPED"

$\frac{1}{5}$ of 135 = 27 (A) · $\frac{2}{10}$ of 180 = 36 (D) · $\frac{5}{10}$ of 40 = 20 (O) · $\frac{2}{3}$ of 48 = 32 (B) · $\frac{1}{3}$ of 45 = 15 (I) · $\frac{4}{8}$ of 50 = 25 (E) · $\frac{2}{6}$ of 30 = 10 (T) · $\frac{6}{8}$ of 24 = 18 (W) · $\frac{1}{6}$ of 12 = 2 (R) · $\frac{5}{6}$ of 42 = 35 (P) · $\frac{1}{6}$ of 186 = 31 (U) · $\frac{1}{6}$ of 78 = 13 (L) · $\frac{1}{2}$ of 28 = 14 (N) · $\frac{1}{4}$ of 36 = 9 (H) · $\frac{2}{10}$ of 105 = 21 (C) · $\frac{1}{2}$ of 22 = 11 (S)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Clover

$22 \div 2 = 11$ · $36 \div 9 = 4$ · $11 \div 11 = 1$ · $50 \div 10 = 5$ · $72 \div 9 = 8$ · $14 \div 2 = 7$ · $27 \div 9 = 3$ · $99 \div 11 = 9$ · $2 \div 1 = 2$ · $50 \div 5 = 10$ · $144 \div 12 = 12$