

The Magic Star Mystery

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

Detective: _____ Date: _____

Someone took the Magic Star Crystal from the Glitter Forest. It is up to you to find the bad unicorn!

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	MAGIC HORN POWER	SPARKLE GEAR	HOOFPRI NT DIRECTION	MANE COLOR	DISLIKES
Breezy	makes stars glow	jeweled saddle	points right	neon purple	loud music
Penny	makes stars glow	golden wing shoes	points right	neon purple	sticky mud
Barnaby	shoots pink bubbles	jeweled saddle	points left	neon purple	loud music
Sky	creates rainbow paths	silver crown	points right	neon purple	sour apples
Clover	shoots pink bubbles	glowing collar	points left	ocean blue	loud music
Cloud	creates rainbow paths	glitter cape	points right	bright pink	loud music
Coco	turns rocks to candy	golden wing shoes	points left	bright pink	loud music
Star	creates rainbow paths	glowing collar	points left	ocean blue	sour apples
Shimmer	creates rainbow paths	golden wing shoes	points right	ocean blue	sticky mud
Pip	creates rainbow paths	golden wing shoes	points right	neon purple	sour apples
Dash	shoots pink bubbles	silver crown	points right	neon purple	sticky mud
Bluey	shoots pink bubbles	glitter cape	points right	neon purple	sour apples
Ziggy	shoots pink bubbles	glowing collar	points right	ocean blue	sour apples
Prancer	turns rocks to candy	silver crown	points right	ocean blue	sticky mud
Jewel	makes stars glow	golden wing shoes	points left	neon purple	sour apples
Luna	grows giant flowers	silver crown	points right	neon purple	sour apples
Twinkle	grows giant flowers	jeweled saddle	points right	bright pink	sticky mud
Sparkles	creates rainbow paths	glowing collar	points left	neon purple	sour apples
Daisy	shoots pink bubbles	golden wing shoes	points right	bright pink	sour apples
Rosie	grows giant flowers	jeweled saddle	points right	neon purple	loud music
Sunny	makes stars glow	golden wing shoes	points right	neon purple	sour apples

CLUE 1 Addition

We need to add the magical sparkles on the trail to find the first clue.

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

T																T
17	14	19	12	6	3	3	10	6	7	18	15	19	2	7	15	17
								T	T							
11	19	10	8	10	9	3	6	17	17	19	8	20	10	4	19	

$5 + 12 = \square \rightarrow$ T	$10 + 9 = \square \rightarrow$ E	$5 + 5 = \square \rightarrow$ A	
$6 + 2 = \square \rightarrow$ R	$2 + 2 = \square \rightarrow$ P	$12 + 6 = \square \rightarrow$ D	$1 + 1 = \square \rightarrow$ S
$2 + 5 = \square \rightarrow$ N	$10 + 10 = \square \rightarrow$ C	$7 + 7 = \square \rightarrow$ H	
$3 + 9 = \square \rightarrow$ V	$3 + 6 = \square \rightarrow$ G	$2 + 1 = \square \rightarrow$ L	$4 + 11 = \square \rightarrow$ O
$3 + 3 = \square \rightarrow$ I	$4 + 7 = \square \rightarrow$ W		

Scratch space:

CLUE 2

Subtraction

Some glitter cupcakes were eaten by the thief. Let us subtract to find out how many are left.

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

T													T						T		T	
2	13	5	13	8	8	12	1	7	14	16	2	15	1	8	14	16	2	2	8			

T						T	
2	13	5	7	14	17	13	2

$7 - 5 = \square \rightarrow \boxed{\text{T}}$

$14 - 1 = \square \rightarrow \boxed{\text{H}}$

$10 - 2 = \square \rightarrow \boxed{\text{O}}$

$20 - 4 = \square \rightarrow \boxed{\text{N}}$

$9 - 2 = \square \rightarrow \boxed{\text{R}}$

$16 - 2 = \square \rightarrow \boxed{\text{I}}$

$18 - 3 = \square \rightarrow \boxed{\text{S}}$

$2 - 1 = \square \rightarrow \boxed{\text{P}}$

$20 - 3 = \square \rightarrow \boxed{\text{G}}$

$15 - 3 = \square \rightarrow \boxed{\text{F}}$

$13 - 8 = \square \rightarrow \boxed{\text{E}}$

Scratch space:

CLUE 3 Skip counting

The star stepping stones must be counted by twos. Skip count to find the path!

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

T			T							T						
25	60	6	25	60	42	6	35	60	130	25	6	15	15	39	9	50

130	20	20	26	6	15

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

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

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

Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 → **S**

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

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

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

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

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

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

Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 → **E**

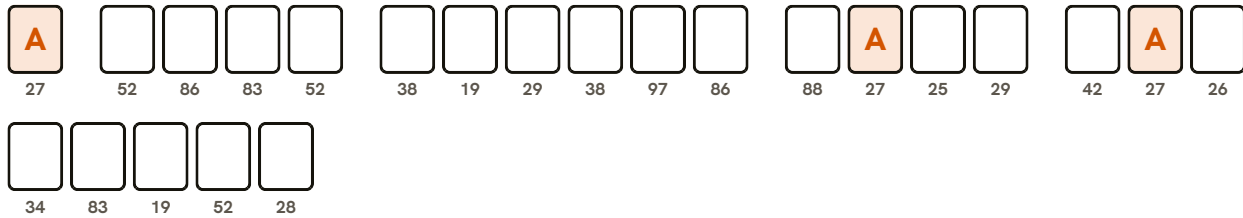
Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **U**

Scratch space:

CLUE 4 Place value

The secret code on the gate has tens and ones blocks. Let us read the place value!

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



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

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

What number has 9 tens and 7 ones? → **L**

What number has 5 tens and 2 ones? → **N**

What number has 2 tens and 9 ones? → **R**

What number has 2 tens and 6 ones? → **S**

What number has 2 tens and 8 ones? → **D**

What number has 2 tens and 5 ones? → **I**

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

What number has 8 tens and 8 ones? → **H**

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

What number has 4 tens and 2 ones? → **W**

What number has 1 ten and 9 ones? → **U**

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

Scratch space:

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

The magic potion needs ten flower petals. We have some but need more. Find how many are missing!

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:

$6 + \underline{\quad} = 17$

$6 + \underline{\quad} = 12$

$8 + \underline{\quad} = 18$

$8 + \underline{\quad} = 10$

$7 + \underline{\quad} = 19$

$8 + \underline{\quad} = 16$

$4 + \underline{\quad} = 13$

$8 + \underline{\quad} = 9$

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

$10 + \underline{\quad} = 13$

$4 + \underline{\quad} = 9$

Step 2 - cross out the sentence with each answer:

1. The villain turns rocks to sweet candy, then flies off in golden wing shoes.
2. The villain turns rocks to sweet candy, then wraps up in a glitter cape.
3. The villain creates rainbow paths to run, then wraps up in a glitter cape.
4. The villain creates rainbow paths to run, then flies off in golden wing shoes.
5. The villain turns rocks to sweet candy, then adjusts a shiny silver crown.
6. The villain creates rainbow paths to run, then adjusts a shiny silver crown.
7. The villain makes stars glow very bright, then adjusts a shiny silver crown.
8. The villain shoots pink bubbles to escape, then sits on a fancy jeweled saddle.
9. The villain shoots pink bubbles to escape, then lights the way with a glowing collar.
10. The villain makes stars glow very bright, then flies off in golden wing shoes.
11. The villain grows giant flowers to hide, then adjusts a shiny silver crown.
12. The villain creates rainbow paths to run, then lights the way with a glowing collar.

Answer Key

The Magic Star Mystery

Culprit: Pip

creates rainbow paths · golden wing shoes · points right · neon purple · sour apples

Trail: Start 21 → Clue 1 19 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT WEAR A GLITTER CAPE"

$5 + 12 = 17$ (T) · $10 + 9 = 19$ (E) · $5 + 5 = 10$ (A) · $6 + 2 = 8$ (R) · $2 + 2 = 4$ (P) · $12 + 6 = 18$ (D) · $1 + 1 = 2$ (S) · $2 + 5 = 7$ (N) · $10 + 10 = 20$ (C) · $7 + 7 = 14$ (H) · $3 + 9 = 12$ (V) · $3 + 6 = 9$ (G) · $2 + 1 = 3$ (L) · $4 + 11 = 15$ (O) · $3 + 3 = 6$ (I) · $4 + 7 = 11$ (W)

Clue 2 (Subtraction): "THE HOOFPRIENTS POINT TO THE RIGHT"

$7 - 5 = 2$ (T) · $14 - 1 = 13$ (H) · $10 - 2 = 8$ (O) · $20 - 4 = 16$ (N) · $9 - 2 = 7$ (R) · $16 - 2 = 14$ (I) · $18 - 3 = 15$ (S) · $2 - 1 = 1$ (P) · $20 - 3 = 17$ (G) · $15 - 3 = 12$ (F) · $13 - 8 = 5$ (E)

Clue 3 (Skip counting): "THE THIEF HATES SOUR APPLES"

Skip-count by 5s. Fill the blank: $5, 10, 15, 20, \underline{\quad}, 30, 35 = 25$ (T) · Skip-count by 3s. Fill the blank: $3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, \underline{\quad}, 45, 48 = 42$ (I) · Skip-count by 2s. Fill the blank: $2, 4, 6, 8, 10, 12, 14, 16, 18, \underline{\quad}, 22, 24 = 20$ (P) · Skip-count by 5s. Fill the blank: $5, 10, \underline{\quad}, 20, 25 = 15$ (S) · Skip-count by 5s. Fill the blank: $5, 10, 15, 20, 25, 30, \underline{\quad}, 40, 45 = 35$ (F) · Skip-count by 10s. Fill the blank: $10, 20, 30, 40, 50, \underline{\quad}, 70, 80 = 60$ (H) · Skip-count by 10s. Fill the blank: $10, 20, 30, 40, \underline{\quad}, 60, 70 = 50$ (R) · Skip-count by 3s. Fill the blank: $3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, \underline{\quad}, 42, 45 = 39$ (O) · Skip-count by 2s. Fill the blank: $2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, \underline{\quad}, 28, 30 = 26$ (L) · Skip-count by 10s. Fill the blank: $10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, \underline{\quad}, 140, 150 = 130$ (A) · Skip-count by 2s. Fill the blank: $2, 4, \underline{\quad}, 8, 10 = 6$ (E) · Skip-count by 3s. Fill the blank: $3, 6, \underline{\quad}, 12, 15 = 9$ (U)

Clue 4 (Place value): "A NEON PURPLE HAIR WAS FOUND"

What number has 2 tens and 7 ones? = 27 (A) · What number has 8 tens and 6 ones? = 86 (E) · What number has 9 tens and 7 ones? = 97 (L) · What number has 5 tens and 2 ones? = 52 (N) · What number has 2 tens and 9 ones? = 29 (R) · What number has 2 tens and 6 ones? = 26 (S) · What number has 2 tens and 8 ones? = 28 (D) · What number has 2 tens and 5 ones? = 25 (I) · What number has 3 tens and 4 ones? = 34 (F) · What number has 8 tens and 8 ones? = 88 (H) · What number has 8 tens and 3 ones? = 83 (O) · What number has 4 tens and 2 ones? = 42 (W) · What number has 1 ten and 9 ones? = 19 (U) · What number has 3 tens and 8 ones? = 38 (P)

Clue 5 (Missing addends): surviving statement is box 4 → Pip

$6 + \underline{\quad} = 17 = 11$ · $6 + \underline{\quad} = 12 = 6$ · $8 + \underline{\quad} = 18 = 10$ · $8 + \underline{\quad} = 10 = 2$ · $7 + \underline{\quad} = 19 = 12$ · $8 + \underline{\quad} = 16 = 8$ · $4 + \underline{\quad} = 13 = 9$ · $8 + \underline{\quad} = 9 = 1$ · $1 + \underline{\quad} = 8 = 7$ · $10 + \underline{\quad} = 13 = 3$ · $4 + \underline{\quad} = 9 = 5$