



The Golden Pumpkin Mystery

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

Detective: _____ **Date:** _____

Oh no! Someone took the shiny Golden Pumpkin from the Maple Woods Autumn Festival! Mayor Oak needs our help to find it. Solve the math clues to spot the Leaf Thief before the big bonfire tonight!

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 Leaf Thief is _____

Possible suspects

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

NAME	AUTUMN TRICK	SECRET TALENT	RAKE GRIP	CROWN COLOR	WEAKNESS
Clover	Leaf Spinner	Cider Spiller	Left-handed raker	Red Leaf Crown	Cozy scarfs
Rusty	Leaf Spinner	Fog Creator	Right-handed raker	Orange Leaf Crown	Cozy scarfs
Basil	Leaf Spinner	Fog Creator	Left-handed raker	Red Leaf Crown	Sunny days
Ginger	Acorn Tosser	Fog Creator	Left-handed raker	Orange Leaf Crown	Warm cocoa
Hunter	Pumpkin Roller	Frost Maker	Right-handed raker	Orange Leaf Crown	Warm cocoa
Daisy	Wind Blaster	Pie Baker	Right-handed raker	Yellow Leaf Crown	Sunny days
Flora	Pumpkin Roller	Fog Creator	Right-handed raker	Orange Leaf Crown	Cozy scarfs
Otis	Leaf Spinner	Fog Creator	Right-handed raker	Red Leaf Crown	Warm cocoa
Pippin	Acorn Tosser	Pie Baker	Right-handed raker	Yellow Leaf Crown	Warm cocoa
Penny	Apple Picker	Pie Baker	Left-handed raker	Red Leaf Crown	Warm cocoa
Hazel	Pumpkin Roller	Pie Baker	Right-handed raker	Red Leaf Crown	Cozy scarfs
Maple	Apple Picker	Twig Snapper	Right-handed raker	Red Leaf Crown	Warm cocoa
Bruno	Apple Picker	Frost Maker	Right-handed raker	Orange Leaf Crown	Cozy scarfs
Autumn	Pumpkin Roller	Pie Baker	Left-handed raker	Orange Leaf Crown	Sunny days
Copper	Wind Blaster	Twig Snapper	Right-handed raker	Yellow Leaf Crown	Sunny days
Birch	Wind Blaster	Cider Spiller	Right-handed raker	Red Leaf Crown	Warm cocoa
Teddy	Pumpkin Roller	Cider Spiller	Left-handed raker	Yellow Leaf Crown	Sunny days
Woody	Leaf Spinner	Frost Maker	Left-handed raker	Red Leaf Crown	Warm cocoa
Saffron	Leaf Spinner	Twig Snapper	Left-handed raker	Yellow Leaf Crown	Sunny days
Ash	Wind Blaster	Frost Maker	Right-handed raker	Red Leaf Crown	Warm cocoa
Chester	Leaf Spinner	Pie Baker	Right-handed raker	Red Leaf Crown	Warm cocoa

CLUE 1 Addition

We find some dropped leaves on the path. We must add the red leaves and yellow leaves to count them all.
This math reveals our first big clue!

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

T			T											T
75	41	91	75	41	58	91	47	42	71	91	95	63	71	75
95	32	58	83	83	84	58	42	91	96					

$25 + 50 = \square \rightarrow$ T	$54 + 30 = \square \rightarrow$ C	$19 + 28 = \square \rightarrow$ F
$51 + 44 = \square \rightarrow$ S	$58 + 25 = \square \rightarrow$ L	$48 + 23 = \square \rightarrow$ O
$37 + 54 = \square \rightarrow$ E	$15 + 26 = \square \rightarrow$ H	$16 + 16 = \square \rightarrow$ P
$15 + 27 = \square \rightarrow$ D	$40 + 56 = \square \rightarrow$ R	$44 + 19 = \square \rightarrow$ N
$25 + 33 = \square \rightarrow$ I		

Scratch space:

CLUE 2

Subtraction

The squirrel team had a big basket of apples. But some rolling pumpkins bumped into them and broke some. We subtract the broken apples to get our next clue.

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

T 21	16	74	T 21	16	57	74	46	49	17	61	74	20	13	57	T 21	16
T 21	16	74	49	57	58	16	T 21	16	17	22	88					

$54 - 33 = \square \rightarrow \text{T}$

$81 - 7 = \square \rightarrow \text{E}$

$42 - 25 = \square \rightarrow \text{A}$

$45 - 29 = \square \rightarrow \text{H}$

$83 - 26 = \square \rightarrow \text{I}$

$47 - 34 = \square \rightarrow \text{W}$

$76 - 15 = \square \rightarrow \text{K}$

$60 - 38 = \square \rightarrow \text{N}$

$70 - 24 = \square \rightarrow \text{F}$

$71 - 22 = \square \rightarrow \text{R}$

$78 - 20 = \square \rightarrow \text{G}$

$95 - 7 = \square \rightarrow \text{D}$

$33 - 13 = \square \rightarrow \text{S}$

Scratch space:

CLUE 3 Place value

We find a secret box locked with a number code. The code has some tens and some ones. Let us find the place value of the digits to open it!

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

W																	
21	23	87	96	72	15	72	15	23	56	82	15	89	56	82	34	74	56

82	34	74	41	54

What number has 2 tens and 1 one? → **W**

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

What number has 5 tens and 6 ones? → **S**

What number has 5 tens and 4 ones? → **F**

What number has 4 tens and 1 one? → **E**

What number has 8 tens and 7 ones? → **R**

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

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

What number has 7 tens and 4 ones? → **I**

What number has 1 ten and 5 ones? → **O**

What number has 9 tens and 6 ones? → **M**

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

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

Scratch space:

CLUE 4 Skip counting

There are rows of pinecones along the trail. If we skip count by fives, we can follow the path to find where the thief went next.

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

T			T												
33	21	18	33	21	28	18	65	100	18	50	10	120	10	18	8
140	18	50	39	18	120										

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

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

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 → **H**

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

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

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

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 → **I**

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

Scratch space:

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

We need twelve acorns to fill the magic jar, but we only have eight. How many more do we need? Solving this missing number points us to the thief!

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:

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

$2 + \underline{\quad} = 8$

$3 + \underline{\quad} = 4$

$1 + \underline{\quad} = 4$

$7 + \underline{\quad} = 12$

$6 + \underline{\quad} = 13$

$10 + \underline{\quad} = 18$

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

$2 + \underline{\quad} = 13$

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

$10 + \underline{\quad} = 14$

Step 2 - cross out the sentence with each answer:

1. The villain grabs a red apple, then snaps a dry twig.
2. The villain spins a pile of leaves, then bakes a sweet pie.
3. The villain blows a cold wind, then snaps a dry twig.
4. The villain throws a giant acorn, then spills a cup of hot cider.
5. The villain throws a giant acorn, then hides in the thick fog.
6. The villain spins a pile of leaves, then hides in the thick fog.
7. The villain grabs a red apple, then bakes a sweet pie.
8. The villain spins a pile of leaves, then freezes the grass.
9. The villain throws a giant acorn, then freezes the grass.
10. The villain blows a cold wind, then freezes the grass.
11. The villain rolls a heavy pumpkin, then hides in the thick fog.
12. The villain rolls a heavy pumpkin, then freezes the grass.

Answer Key

The Golden Pumpkin Mystery

Culprit: Chester

Leaf Spinner · Pie Baker · Right-handed raker · Red Leaf Crown · Warm cocoa

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT SPILL CIDER"

$25 + 50 = 75$ (T) · $54 + 30 = 84$ (C) · $19 + 28 = 47$ (F) · $51 + 44 = 95$ (S) · $58 + 25 = 83$ (L) · $48 + 23 = 71$ (O) · $37 + 54 = 91$ (E) · $15 + 26 = 41$ (H) · $16 + 16 = 32$ (P) · $15 + 27 = 42$ (D) · $40 + 56 = 96$ (R) · $44 + 19 = 63$ (N) · $25 + 33 = 58$ (I)

Clue 2 (Subtraction): "THE THIEF RAKES WITH THE RIGHT HAND"

$54 - 33 = 21$ (T) · $81 - 7 = 74$ (E) · $42 - 25 = 17$ (A) · $45 - 29 = 16$ (H) · $83 - 26 = 57$ (I) · $47 - 34 = 13$ (W) · $76 - 15 = 61$ (K) · $60 - 38 = 22$ (N) · $70 - 24 = 46$ (F) · $71 - 22 = 49$ (R) · $78 - 20 = 58$ (G) · $95 - 7 = 88$ (D) · $33 - 13 = 20$ (S)

Clue 3 (Place value): "WARM COCOA STOPS THIS THIEF"

What number has 2 tens and 1 one? = 21 (W) · What number has 8 tens and 2 ones? = 82 (T) · What number has 5 tens and 6 ones? = 56 (S) · What number has 5 tens and 4 ones? = 54 (F) · What number has 4 tens and 1 one? = 41 (E) · What number has 8 tens and 7 ones? = 87 (R) · What number has 8 tens and 9 ones? = 89 (P) · What number has 7 tens and 2 ones? = 72 (C) · What number has 7 tens and 4 ones? = 74 (I) · What number has 1 ten and 5 ones? = 15 (O) · What number has 9 tens and 6 ones? = 96 (M) · What number has 2 tens and 3 ones? = 23 (A) · What number has 3 tens and 4 ones? = 34 (H)

Clue 4 (Skip counting): "THE THIEF WEARS RED LEAVES"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (T) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 = 10 (R) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (L) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (H) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (D) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 = 39 (V) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 = 50 (A) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, __, 20, 22 = 18 (E) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (S) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (F)

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

$4 + \underline{\quad} = 14 = 10$ · $2 + \underline{\quad} = 8 = 6$ · $3 + \underline{\quad} = 4 = 1$ · $1 + \underline{\quad} = 4 = 3$ · $7 + \underline{\quad} = 12 = 5$ · $6 + \underline{\quad} = 13 = 7$ · $10 + \underline{\quad} = 18 = 8$ · $7 + \underline{\quad} = 19 = 12$ · $2 + \underline{\quad} = 13 = 11$ · $10 + \underline{\quad} = 19 = 9$ · $10 + \underline{\quad} = 14 = 4$