



The Case of the Missing Magic Paintbrush

Grade 3 math · Place value, Addition, Subtraction, Skip counting, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Oh no! The legendary Magic Paintbrush has been swiped from the Disney Animation Studio Vault. Without it, the cartoons cannot be drawn! Chief Detective Mickey needs your math skills to track down the sneaky Ink Thief and save the animation magic.

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 Ink 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 SKILL	POCKET ITEM	OUTFIT DETAIL	FUR COLOR	MAIN FEAR
Oswald	shadow mimic	firework sparkler	wears white gloves	white fur	sticky honey
PJ	pixie dust	firework sparkler	wears white gloves	brown fur	bright spotlights
Goofy	shrink potion	spinning wheel	wears white gloves	white fur	sticky honey
Minnie	pixie dust	firework sparkler	wears yellow shoes	white fur	sticky honey
Ortensia	shadow mimic	lucky coin	wears white gloves	white fur	sticky honey
Jaq	super bounce	cartoon glove	wears yellow shoes	white fur	loud sirens
Louie	magic paint	cartoon glove	wears white gloves	black fur	bright spotlights
Pluto	shrink potion	spinning wheel	wears yellow shoes	white fur	sticky honey
Daisy	shadow mimic	spinning wheel	wears white gloves	black fur	sticky honey
Ludwig	shrink potion	firework sparkler	wears yellow shoes	white fur	bright spotlights
Gideon	shrink potion	cartoon glove	wears yellow shoes	white fur	sticky honey
Clara	shadow mimic	firework sparkler	wears yellow shoes	white fur	sticky honey
Donald	pixie dust	music box	wears white gloves	black fur	sticky honey
Gus	magic paint	music box	wears white gloves	black fur	loud sirens
Max	magic paint	music box	wears yellow shoes	white fur	bright spotlights
Dewey	shrink potion	cartoon glove	wears white gloves	brown fur	sticky honey
Mickey	shrink potion	firework sparkler	wears white gloves	black fur	bright spotlights
Scrooge	shadow mimic	firework sparkler	wears yellow shoes	brown fur	sticky honey
Clarabelle	super bounce	cartoon glove	wears yellow shoes	white fur	sticky honey
Launchpad	super bounce	music box	wears yellow shoes	brown fur	bright spotlights
Horace	shrink potion	spinning wheel	wears white gloves	black fur	loud sirens

CLUE 1

You find a digital keypad glowing near the main vault door. To crack the security code, we must find the value of the digit in the tens place.

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

A number line from 0 to 10,000. The line is marked with the following numbers in boxes: 90, 400, 1000, 900, 10, 80, 80, 40, 100, 80, 1000, 500, 700, 80, 90, 400, 60, 30, 1000. The number 90 is highlighted in orange.

What is the value of the 9 in 3,498? → **T**

What is the value of the 6 in 967? → **A**

What is the value of the 1 in 710? → **R**

What is the value of the 3 in 234? → **V**

What is the value of the 6 in 26,114? → **L**

What is the value of the 5 in 253? →

1

What is the value of the 8 in 8,347? → **P**

What is the value of the 4 in 458? → **H**

What is the value of the 5 in 591? → **S**

What is the value of the 1 in 104? → **D**

What is the value of the 1 in 1,537? → **E**

What is the value of the 4 in 2,846? → **K**

What is the value of the 8 in 783? →

What is the value of the 6 in 678? → **W**

What is the value of the 2 in 205? → **G**

What is the value of the 9 in 916? → **C**

What is the value of the 7 in 784? → **N**

Scratch space:

CLUE 2 Addition

On the floor, several spilled jars of sparkling glitter paint are scattered. If we add the blue jars to the gold jars, we will find the path.

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

T																			
431	297	916	480	890	480	584	916	721	431	240	337	480	240	916	337	548	556	625	282
587	916	374	374	795	240	480	297	795	916	480									

$178 + 253 = \boxed{} \rightarrow \boxed{\text{T}}$

$113 + 127 = \boxed{} \rightarrow \boxed{\text{W}}$

$225 + 255 = \boxed{} \rightarrow \boxed{\text{S}}$

$324 + 224 = \boxed{} \rightarrow \boxed{\text{R}}$

$487 + 429 = \boxed{} \rightarrow \boxed{\text{E}}$

$130 + 244 = \boxed{} \rightarrow \boxed{\text{L}}$

$551 + 244 = \boxed{} \rightarrow \boxed{\text{O}}$

$256 + 465 = \boxed{} \rightarrow \boxed{\text{C}}$

$393 + 194 = \boxed{} \rightarrow \boxed{\text{Y}}$

$315 + 310 = \boxed{} \rightarrow \boxed{\text{N}}$

$300 + 590 = \boxed{} \rightarrow \boxed{\text{U}}$

$99 + 198 = \boxed{} \rightarrow \boxed{\text{H}}$

$202 + 135 = \boxed{} \rightarrow \boxed{\text{A}}$

$94 + 188 = \boxed{} \rightarrow \boxed{\text{G}}$

$360 + 224 = \boxed{} \rightarrow \boxed{\text{P}}$

$346 + 210 = \boxed{} \rightarrow \boxed{\text{I}}$

Scratch space:

Subtraction

A stack of classic animation sketches is missing some pages. By subtracting the remaining drawings from the original total, we get our next lead.

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

585 362 181 895 462 896 896 258 462 543 134 258 463 585 401 258 344 344 181 289

363 541 463 585 462 158 607 541 362 708 543 181 541

$$786 - 201 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$1100 - 392 = \boxed{} \rightarrow \boxed{0}$$

$$509 - 108 = \boxed{} \rightarrow \boxed{\text{R}}$$

$750 - 207 = \boxed{} \rightarrow \boxed{\text{N}}$

$496 - 34 = \boxed{} \rightarrow \boxed{\text{I}}$

534 - 171 = → **B**

$408 - 250 = \boxed{} \rightarrow \boxed{\text{C}}$

$$544 - 286 = \boxed{} \rightarrow \boxed{\mathbf{A}}$$

$564 - 275 = \boxed{} \rightarrow \mathbf{D}$

$$1271 - 375 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$543 - 181 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$547 - 6 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$$690 - 83 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$1176 - 281 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$256 - 75 = \boxed{} \rightarrow \boxed{\text{E}}$

$$750 - 287 = \boxed{} \rightarrow \boxed{\text{S}}$$

$161 - 27 = \boxed{} \rightarrow \boxed{\mathbf{W}}$

$$376 - 32 = \boxed{} \rightarrow \boxed{\text{P}}$$

Scratch space:

CLUE 4 Skip counting

Mickey stencils are printed along the hallway floor in a steady pattern. Skip counting the ears by threes reveals the hidden vault room.

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

W 24	80	35	16	120	65	42	W 24	20	21	14	80	35	120	36	27	14
14	20	80	28	60	80	65	80									

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, __, 26, 28 → **W**

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

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, 60, 70, __, 90, 100 → **E**

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

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

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

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 → **R**

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

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

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

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

Scratch space:

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

We find a box of magic sketch pencils left behind by the thief. Sharing them equally among the four detective team members gives us the final clue.

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:

$110 \div 10 = \boxed{}$

$63 \div 7 = \boxed{}$

$32 \div 8 = \boxed{}$

$8 \div 1 = \boxed{}$

$1 \div 1 = \boxed{}$

$36 \div 3 = \boxed{}$

$21 \div 7 = \boxed{}$

$40 \div 4 = \boxed{}$

$10 \div 5 = \boxed{}$

$35 \div 5 = \boxed{}$

$40 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain splashes magic paint on the canvas, then flips a shiny lucky coin.
2. The villain blends into the wall like a shadow, then spins a wooden spinning wheel.
3. The villain splashes magic paint on the canvas, then waves a big cartoon glove.
4. The villain sprinkles pixie dust in the air, then escapes with a firework sparkler.
5. The villain sprinkles pixie dust in the air, then waves a big cartoon glove.
6. The villain bounces high over the security wall, then waves a big cartoon glove.
7. The villain bounces high over the security wall, then spins a wooden spinning wheel.
8. The villain drinks a tiny shrink potion, then escapes with a firework sparkler.
9. The villain blends into the wall like a shadow, then escapes with a firework sparkler.
10. The villain bounces high over the security wall, then escapes with a firework sparkler.
11. The villain drinks a tiny shrink potion, then waves a big cartoon glove.
12. The villain splashes magic paint on the canvas, then spins a wooden spinning wheel.

Answer Key

The Case of the Missing Magic Paintbrush

Culprit: Clarabelle

super bounce · cartoon glove · wears yellow shoes · white fur · sticky honey

Trail: Start 21 → Clue 1 17 → Clue 2 9 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE CROOK DOES NOT HAVE A SPINNING WHEEL"

What is the value of the 9 in 3,498? = 90 (T) · What is the value of the 6 in 967? = 60 (A) · What is the value of the 1 in 710? = 10 (R) · What is the value of the 3 in 234? = 30 (V) · What is the value of the 6 in 26,114? = 6000 (L) · What is the value of the 5 in 253? = 50 (I) · What is the value of the 8 in 8,347? = 8000 (P) · What is the value of the 4 in 458? = 400 (H) · What is the value of the 5 in 591? = 500 (S) · What is the value of the 1 in 104? = 100 (D) · What is the value of the 1 in 1,537? = 1000 (E) · What is the value of the 4 in 2,846? = 40 (K) · What is the value of the 8 in 783? = 80 (O) · What is the value of the 6 in 678? = 600 (W) · What is the value of the 2 in 205? = 200 (G) · What is the value of the 9 in 916? = 900 (C) · What is the value of the 7 in 784? = 700 (N)

Clue 2 (Addition): "THE SUSPECT WAS WEARING YELLOW SHOES"

178 + 253 = 431 (T) · 113 + 127 = 240 (W) · 225 + 255 = 480 (S) · 324 + 224 = 548 (R) · 487 + 429 = 916 (E) · 130 + 244 = 374 (L) · 551 + 244 = 795 (O) · 256 + 465 = 721 (C) · 393 + 194 = 587 (Y) · 315 + 310 = 625 (N) · 300 + 590 = 890 (U) · 99 + 198 = 297 (H) · 202 + 135 = 337 (A) · 94 + 188 = 282 (G) · 360 + 224 = 584 (P) · 346 + 210 = 556 (I)

Clue 3 (Subtraction): "THE VILLAIN WAS TRAPPED BY STICKY HONEY"

786 - 201 = 585 (T) · 1100 - 392 = 708 (O) · 509 - 108 = 401 (R) · 750 - 207 = 543 (N) · 496 - 34 = 462 (I) · 534 - 171 = 363 (B) · 408 - 250 = 158 (C) · 544 - 286 = 258 (A) · 564 - 275 = 289 (D) · 1271 - 375 = 896 (L) · 543 - 181 = 362 (H) · 547 - 6 = 541 (Y) · 690 - 83 = 607 (K) · 1176 - 281 = 895 (V) · 256 - 75 = 181 (E) · 750 - 287 = 463 (S) · 161 - 27 = 134 (W) · 376 - 32 = 344 (P)

Clue 4 (Skip counting): "WE FOUND WHITE FUR AT THE SCENE"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, __, 26, 28 = 24 (W) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 = 60 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 = 35 (F) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (E) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (U) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (N) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, __, 18, 20 = 16 (O) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (A) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (R) · Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 = 20 (H) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (S) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 = 14 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (D)

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

110 ÷ 10 = 11 · 63 ÷ 7 = 9 · 32 ÷ 8 = 4 · 8 ÷ 1 = 8 · 1 ÷ 1 = 1 · 36 ÷ 3 = 12 · 21 ÷ 7 = 3 · 40 ÷ 4 = 10 · 10 ÷ 5 = 2 · 35 ÷ 5 = 7 · 40 ÷ 8 = 5