

The Disney Ink Mystery

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

Detective: _____ Date: _____

Someone has stolen the Sorcerer's Magic Paintbrush from the Disney Magic Archives! The Lead Animator needs the Toontown Detectives to find the culprit before the magic ink dries forever.

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 Blot Thief is _____

Possible suspects

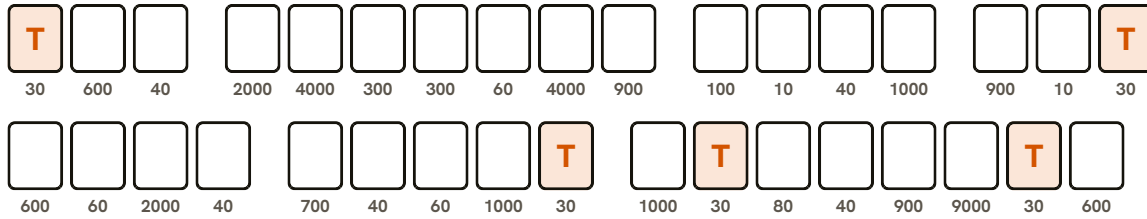
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	MAGIC POWER	SPECIAL TOOL	ARTIST HAND	HAIR STYLE	FUNNY WEAKNESS
Minnie Mouse	Ice Magic	Beast Strength	Left handed sketcher	Golden yellow locks	Scared of alarm clocks
Jasmine Princess	Ice Magic	Apple Magic	Left handed sketcher	Bright red hair	Melted by warm hugs
Pluto Pup	Ice Magic	Frying Pan Defense	Left handed sketcher	Bright red hair	Tickled by feathers
Wendy Darling	Ice Magic	Glass Slipper Speed	Right handed sketcher	Golden yellow locks	Scared of alarm clocks
Nala Queen	Mermaid Swimming	Frying Pan Defense	Left handed sketcher	Golden yellow locks	Melted by warm hugs
Ariel Mermaid	Magic Lamp Wishes	Apple Magic	Right handed sketcher	Bright red hair	Tickled by feathers
Woody Cowboy	Pixie Dust Flight	Carpet Flying	Left handed sketcher	Bright red hair	Melted by warm hugs
Simba King	Magic Lamp Wishes	Glass Slipper Speed	Right handed sketcher	Dark black ears	Melted by warm hugs
Hercules Hero	Ice Magic	Beast Strength	Right handed sketcher	Golden yellow locks	Scared of alarm clocks
Lilo Pelekai	Mermaid Swimming	Glass Slipper Speed	Right handed sketcher	Dark black ears	Melted by warm hugs
Belle Princess	Mermaid Swimming	Carpet Flying	Right handed sketcher	Golden yellow locks	Melted by warm hugs
Tarzan King	Ice Magic	Carpet Flying	Left handed sketcher	Bright red hair	Melted by warm hugs
Mickey Mouse	Pixie Dust Flight	Glass Slipper Speed	Left handed sketcher	Dark black ears	Scared of alarm clocks
Peter Pan	Ice Magic	Beast Strength	Left handed sketcher	Golden yellow locks	Melted by warm hugs
Megara Muse	Magic Lamp Wishes	Carpet Flying	Left handed sketcher	Bright red hair	Scared of alarm clocks
Alice Liddell	Shadow Mimicry	Frying Pan Defense	Right handed sketcher	Golden yellow locks	Tickled by feathers
Goofy Goof	Mermaid Swimming	Apple Magic	Left handed sketcher	Bright red hair	Melted by warm hugs
Daisy Duck	Magic Lamp Wishes	Frying Pan Defense	Right handed sketcher	Bright red hair	Melted by warm hugs
Jane Porter	Shadow Mimicry	Glass Slipper Speed	Left handed sketcher	Bright red hair	Tickled by feathers
Stitch Alien	Magic Lamp Wishes	Beast Strength	Left handed sketcher	Bright red hair	Melted by warm hugs
Buzz Lightyear	Magic Lamp Wishes	Frying Pan Defense	Left handed sketcher	Dark black ears	Scared of alarm clocks

CLUE 1 Place value

The detective looks at a digital lock on the archive door. The numbers are split into hundreds and tens blocks. Let us count the place values to open it.

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



What is the value of the 3 in 7,531? → **T**

What is the value of the 4 in 84,189? → **I**

What is the value of the 4 in 246? → **E**

What is the value of the 6 in 3,061? → **A**

What is the value of the 3 in 5,385? → **L**

What is the value of the 8 in 483? → **R**

What is the value of the 1 in 21,574? → **S**

What is the value of the 9 in 2,936? → **N**

What is the value of the 7 in 4,728? → **B**

What is the value of the 1 in 159? → **D**

What is the value of the 9 in 89,231? → **G**

What is the value of the 1 in 9,914? → **O**

What is the value of the 6 in 607? → **H**

What is the value of the 2 in 2,788? → **V**

Scratch space:

CLUE 2 Addition

To find the next room, we must add all the magic paint pots found on the shelves. Add them together to get the total.

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

L																			
618	897	871	586	548	257	292	749	897	749	899	292	269	256	426	866	749	247	897	256
								L	L										
895	292	586	548	897	781	257	618	618											

$$215 + 403 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$98 + 171 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$271 + 510 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$403 + 346 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$522 + 375 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$279 + 587 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$157 + 90 = \boxed{} \rightarrow \boxed{\text{G}}$$

$$500 + 371 = \boxed{} \rightarrow \boxed{\text{F}}$$

$$237 + 349 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$151 + 275 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$134 + 122 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$193 + 99 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$126 + 131 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$520 + 379 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$192 + 356 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$579 + 316 = \boxed{} \rightarrow \boxed{\text{O}}$$

Scratch space:

Subtraction

Some magic pencils went missing from the supply box. Subtract the broken pencils from the total to find how many are left.

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

A number line from 0 to 1000 with boxes for numbers. The number 852 is highlighted in orange and labeled with a 'T'.

Number	Label
852	T
267	
860	
421	
530	
510	
427	
815	
671	
852	T
264	
860	
510	
852	T
878	
578	
815	
598	
264	

$1134 - 282 = \boxed{} \rightarrow \boxed{\text{T}}$

$$507 - 240 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$748 - 107 = \boxed{} \rightarrow \mathbf{A}$$

$$626 - 205 = \boxed{} \rightarrow \boxed{\text{C}}$$

$1047 - 278 = \boxed{} \rightarrow \boxed{\text{W}}$

$$849 - 251 = \boxed{} \rightarrow \boxed{0}$$

$1171 - 356 = \boxed{} \rightarrow \boxed{\mathbf{R}}$

$$851 - 180 = \boxed{} \rightarrow \boxed{} \mid$$

$601 - 174 = \square \rightarrow \mathbf{P}$

$$1272 - 394 = \boxed{} \rightarrow \boxed{\text{S}}$$

$631 - 156 = \boxed{} \rightarrow \mathbf{G}$

$$1078 - 218 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$510 - 246 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$728 - 218 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$657 - 127 = \boxed{} \rightarrow \boxed{\text{U}}$$

$621 - 43 = \boxed{} \rightarrow \boxed{\text{F}}$

Scratch space:

CLUE 4 Rounding

An ink radar screen flashes the distance to the thief. The screen only shows numbers rounded to the nearest ten.

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

R					R														
900	80	6000	3000	30	900	600	20	6000	3000	40	80	900	80	700	80	90	30		
2000	20	30	5000	80	6000	80	3000	7000											

Round 921 to the nearest hundred → **R**

Round 36 to the nearest ten → **W**

Round 2,368 to the nearest thousand → **O**

Round 3,267 to the nearest thousand → **S**

Round 7,146 to the nearest thousand → **K**

Round 5,575 to the nearest thousand → **D**

Round 601 to the nearest hundred → **A**

Round 31 to the nearest ten → **T**

Round 91 to the nearest ten → **F**

Round 5,434 to the nearest thousand → **H**

Round 79 to the nearest ten → **E**

Round 18 to the nearest ten → **N**

Round 661 to the nearest hundred → **L**

Scratch space:

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

We find a stash of golden keys. We must share them equally among the team of cartoon detectives to see who gets what.

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:

$24 \div 4 = \boxed{}$

$16 \div 2 = \boxed{}$

$60 \div 12 = \boxed{}$

$70 \div 7 = \boxed{}$

$3 \div 1 = \boxed{}$

$60 \div 5 = \boxed{}$

$36 \div 4 = \boxed{}$

$4 \div 4 = \boxed{}$

$11 \div 1 = \boxed{}$

$4 \div 1 = \boxed{}$

$49 \div 7 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain splashed purple magic ink, then leaped out of the studio window.
2. The villain splashed purple magic ink, then ran through a glowing portal.
3. The villain splashed purple magic ink, then swam down the ink river.
4. The villain unlocked the secret easel, then ran through a glowing portal.
5. The villain cast a sleeping spell, then leaped out of the studio window.
6. The villain unlocked the secret easel, then leaped out of the studio window.
7. The villain unlocked the secret easel, then swam down the ink river.
8. The villain cast a sleeping spell, then ran through a glowing portal.
9. The villain shrank the giant canvas, then fled on a magic carpet.
10. The villain shrank the giant canvas, then vanished in a cloud of glitter.
11. The villain painted a fake exit door, then leaped out of the studio window.
12. The villain shrank the giant canvas, then leaped out of the studio window.

Answer Key

The Disney Ink Mystery

Culprit: Woody Cowboy

Pixie Dust Flight · Carpet Flying · Left handed sketcher · Bright red hair · Melted by warm hugs

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT HAVE BEAST STRENGTH"

What is the value of the 3 in 7,531? = 30 (T) · What is the value of the 4 in 84,189? = 4000 (I) · What is the value of the 4 in 246? = 40 (E) · What is the value of the 6 in 3,061? = 60 (A) · What is the value of the 3 in 5,385? = 300 (L) · What is the value of the 8 in 483? = 80 (R) · What is the value of the 1 in 21,574? = 1000 (S) · What is the value of the 9 in 2,936? = 900 (N) · What is the value of the 7 in 4,728? = 700 (B) · What is the value of the 1 in 159? = 100 (D) · What is the value of the 9 in 89,231? = 9000 (G) · What is the value of the 1 in 9,914? = 10 (O) · What is the value of the 6 in 607? = 600 (H) · What is the value of the 2 in 2,788? = 2000 (V)

Clue 2 (Addition): "LEFT HANDED INK SMUDGES ON THE WALL"

$215 + 403 = 618$ (L) · $98 + 171 = 269$ (K) · $271 + 510 = 781$ (W) · $403 + 346 = 749$ (D) · $522 + 375 = 897$ (E) · $279 + 587 = 866$ (U) · $157 + 90 = 247$ (G) · $500 + 371 = 871$ (F) · $237 + 349 = 586$ (T) · $151 + 275 = 426$ (M) · $134 + 122 = 256$ (S) · $193 + 99 = 292$ (N) · $126 + 131 = 257$ (A) · $520 + 379 = 899$ (I) · $192 + 356 = 548$ (H) · $579 + 316 = 895$ (O)

Clue 3 (Subtraction): "THE CULPRIT MELTS FROM WARM HUGS"

$1134 - 282 = 852$ (T) · $507 - 240 = 267$ (H) · $748 - 107 = 641$ (A) · $626 - 205 = 421$ (C) · $1047 - 278 = 769$ (W) · $849 - 251 = 598$ (O) · $1171 - 356 = 815$ (R) · $851 - 180 = 671$ (I) · $601 - 174 = 427$ (P) · $1272 - 394 = 878$ (S) · $631 - 156 = 475$ (G) · $1078 - 218 = 860$ (E) · $510 - 246 = 264$ (M) · $728 - 218 = 510$ (L) · $657 - 127 = 530$ (U) · $621 - 43 = 578$ (F)

Clue 4 (Rounding): "RED STRANDS WERE LEFT ON THE DESK"

Round 921 to the nearest hundred = 900 (R) · Round 36 to the nearest ten = 40 (W) · Round 2,368 to the nearest thousand = 2000 (O) · Round 3,267 to the nearest thousand = 3000 (S) · Round 7,146 to the nearest thousand = 7000 (K) · Round 5,575 to the nearest thousand = 6000 (D) · Round 601 to the nearest hundred = 600 (A) · Round 31 to the nearest ten = 30 (T) · Round 91 to the nearest ten = 90 (F) · Round 5,434 to the nearest thousand = 5000 (H) · Round 79 to the nearest ten = 80 (E) · Round 18 to the nearest ten = 20 (N) · Round 661 to the nearest hundred = 700 (L)

Clue 5 (Division facts (1-12)): surviving statement is box 2 → Woody Cowboy

$24 \div 4 = 6$ · $16 \div 2 = 8$ · $60 \div 12 = 5$ · $70 \div 7 = 10$ · $3 \div 1 = 3$ · $60 \div 5 = 12$ · $36 \div 4 = 9$ · $4 \div 4 = 1$ · $11 \div 1 = 11$ · $4 \div 1 = 4$ · $49 \div 7 = 7$