



The Great Inkwell Heist

Grade 6 math · Multiplication, Word problems, Place value, Percentages, Division · Reading level grades 3-4

Detective: _____ Date: _____

A sneaky thief has slipped into the Inkwell Archive and swiped the Sorcerer's Magic Paintbrush! The Sorcerer's Apprentice needs your help to track down the thief using magical clues left behind in the ink.

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	SPOOKY POWER	SECRET TALENT	GLOVE STATUS	HAIR COLOR	WEAKNESS
Gyro	makes mirrors talk	turns into a cat	bare hands	ink black hair	clocks ticking
Louie	makes mirrors talk	floats on balloons	bare hands	sparkly blue hair	clocks ticking
Jaq	grows giant beanstalks	floats on balloons	wears white gloves	flaming orange hair	smell of apples
Scrooge	makes mirrors talk	mimics voices	bare hands	ink black hair	clocks ticking
Webby	summons magic wind	turns into a cat	bare hands	flaming orange hair	clocks ticking
Daisy	summons magic wind	creates illusions	bare hands	sparkly blue hair	smell of apples
Mickey	makes mirrors talk	mimics voices	bare hands	sparkly blue hair	smell of apples
Morty	summons magic wind	floats on balloons	bare hands	sparkly blue hair	smell of apples
Ludwig	grows giant beanstalks	floats on balloons	wears white gloves	ink black hair	clocks ticking
Magica	sprinkles pixie dust	freezes water	wears white gloves	flaming orange hair	clocks ticking
Roxanne	grows giant beanstalks	mimics voices	bare hands	sparkly blue hair	clocks ticking
Launchpad	summons magic wind	floats on balloons	wears white gloves	sparkly blue hair	sound of laughter
Clarabelle	grows giant beanstalks	turns into a cat	wears white gloves	ink black hair	sound of laughter
Pete	flings glowing ink	creates illusions	bare hands	sparkly blue hair	smell of apples
Gladstone	summons magic wind	mimics voices	wears white gloves	sparkly blue hair	clocks ticking
Donald	makes mirrors talk	mimics voices	bare hands	flaming orange hair	sound of laughter
Huey	summons magic wind	turns into a cat	wears white gloves	sparkly blue hair	smell of apples
Minnie	grows giant beanstalks	creates illusions	bare hands	flaming orange hair	smell of apples
Ferdie	makes mirrors talk	creates illusions	bare hands	ink black hair	smell of apples
Gus	flings glowing ink	freezes water	bare hands	sparkly blue hair	smell of apples
Goofy	grows giant beanstalks	turns into a cat	bare hands	sparkly blue hair	clocks ticking

CLUE 1
Multiplication facts (1-12)

We found a tray of magic inkbottles sorted into neat rows. Count the total bottles in these grids to decode the first clue.

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

T			T										T						
110	99	72	110	99	144	72	35	96	22	108	108	40	110	35	3	72	72	54	72

		T		
2	22	110	72	3

$10 \times 11 = \square \rightarrow \boxed{\text{T}}$

$12 \times 8 = \square \rightarrow \boxed{\text{C}}$

$12 \times 12 = \square \rightarrow \boxed{\text{I}}$

$5 \times 7 = \square \rightarrow \boxed{\text{F}}$

$1 \times 3 = \square \rightarrow \boxed{\text{R}}$

$9 \times 6 = \square \rightarrow \boxed{\text{Z}}$

$11 \times 2 = \square \rightarrow \boxed{\text{A}}$

$12 \times 6 = \square \rightarrow \boxed{\text{E}}$

$12 \times 9 = \square \rightarrow \boxed{\text{N}}$

$1 \times 2 = \square \rightarrow \boxed{\text{W}}$

$11 \times 9 = \square \rightarrow \boxed{\text{H}}$

$4 \times 10 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

CLUE 2

Word problems

The Sorcerer needs us to solve a puzzle about some missing magic apples. Use your math skills to find the answer and unlock the chest.

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

A witness saw the villain was

B									S
63	67	76	65	57	67	112	116		

.

The Sorcerer lined up 9 rows of 7 dust jars. How many dust jars in all?

Answer: →

B

There were 137 balloons. 25 were used up. How many balloons are left?

Answer: →

N

There were 130 dust jars. 14 were used up. How many dust jars are left?

Answer: →

D

There were 102 dust jars. 37 were used up. How many dust jars are left?

Answer: →

E

There were 92 paintbrushes. 16 were used up. How many paintbrushes are left?

Answer: →

R

The Sorcerer found 4 magic apples yesterday and 53 more today. How many magic apples in all?

Answer: →

H

The Sorcerer found 58 magic apples yesterday and 9 more today. How many magic apples in all?

Answer: →

A

Scratch space:

CLUE 3 Place value

A heavy iron safe holds the next clue. Look closely at the place value of each digit on the dial to crack the vault code.

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

T			T							T			T		
70	700	10	70	700	300	10	9000	700	30	70	10	200	70	700	10
200	400	10	80	80	800	9000	30	2000	2000	80	10	200			

What is the value of the 7 in 11,076? →

T

What is the value of the 2 in 770,245? →

S

What is the value of the 3 in 52,032? →

A

What is the value of the 7 in 44,752? →

H

What is the value of the 8 in 32,289? →

L

What is the value of the 3 in 49,350? →

I

What is the value of the 8 in 944,827? →

O

What is the value of the 9 in 69,785? →

F

What is the value of the 4 in 59,493? →

M

What is the value of the 1 in 25,210? →

E

What is the value of the 2 in 112,849? →

P

Scratch space:

CLUE 4

The Pixie Dust Meter is glowing with power. Work out the charge percentage to reveal the suspect's secret weakness.

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

A number line from 0 to 100. The line is divided into 10 equal segments, each containing a box. The boxes are numbered 15, 28, 19, 18, 30, 40, 23, 11, 40, 6, 25, 37, 19, 34, 18, 27, 19, 15. The boxes containing 15 and 15 are shaded orange and marked with an 'S'.

15	28	19	18	30	40	23	11	40	6	25	37	19	34	18	27	19	15
----	----	----	----	----	----	----	----	----	---	----	----	----	----	----	----	----	----

Below the number line, there are five boxes containing the numbers 43, 2, 6, 7, and 3.

43	2	6	7	3
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50% of 30 = → **S**

10% of 340 = $\rightarrow$

10% of 110 = → **B**

5% of 560 = $\rightarrow$ **P**

40% of 100 = → **L**

50% of 54 = $\rightarrow$ **W**

50% of 4 = $\rightarrow$ **0**

60% of 50 = → **K**

5% of 140 = $\rightarrow$ **N**

25% of 12 = → **D**

50% of 86 = → **F**

5% of 380 = $\rightarrow$ **A**

25% of 100 = → **E**

50% of 74 = → **H**

60% of 10 = → **U**

20% of 115 = → **Y**

10% of 180 = $\rightarrow$ **R**

Scratch space:

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

The archive keys are scattered in a big heap. Share them equally into the magic cups to find 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:

$12 \div 2 = \boxed{}$

$12 \div 4 = \boxed{}$

$44 \div 4 = \boxed{}$

$96 \div 8 = \boxed{}$

$18 \div 2 = \boxed{}$

$63 \div 9 = \boxed{}$

$72 \div 9 = \boxed{}$

$110 \div 11 = \boxed{}$

$22 \div 11 = \boxed{}$

$5 \div 1 = \boxed{}$

$8 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain splashed purple ink everywhere, then vanished in a fake puff of smoke.
2. The villain splashed purple ink everywhere, then scampered off as a black cat.
3. The villain blew a strong magic wind, then sailed away on red balloons.
4. The villain planted a fast growing bean, then vanished in a fake puff of smoke.
5. The villain splashed purple ink everywhere, then mimicked a parrot to trick us.
6. The villain blew a strong magic wind, then vanished in a fake puff of smoke.
7. The villain scattered sparkly pixie dust, then vanished in a fake puff of smoke.
8. The villain scattered sparkly pixie dust, then scampered off as a black cat.
9. The villain planted a fast growing bean, then sailed away on red balloons.
10. The villain planted a fast growing bean, then scampered off as a black cat.
11. The villain shattered a magic mirror, then mimicked a parrot to trick us.
12. The villain planted a fast growing bean, then mimicked a parrot to trick us.

Answer Key

The Great Inkwell Heist

Culprit: Pete

flings glowing ink · creates illusions · bare hands · sparkly blue hair · smell of apples

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

Clue 1 (Multiplication facts (1-12)): "THE THIEF CANNOT FREEZE WATER"

$10 \times 11 = 110$ (T) · $12 \times 8 = 96$ (C) · $12 \times 12 = 144$ (I) · $5 \times 7 = 35$ (F) · $1 \times 3 = 3$ (R) · $9 \times 6 = 54$ (Z) · $11 \times 2 = 22$ (A) · $12 \times 6 = 72$ (E) · $12 \times 9 = 108$ (N) · $1 \times 2 = 2$ (W) · $11 \times 9 = 99$ (H) · $4 \times 10 = 40$ (O)

Clue 2 (Word problems): "BARE HANDS"

The Sorcerer lined up 9 rows of 7 dust jars. How many dust jars in all? = 63 (B) · There were 137 balloons. 25 were used up. How many balloons are left? = 112 (N) · There were 130 dust jars. 14 were used up. How many dust jars are left? = 116 (D) · There were 102 dust jars. 37 were used up. How many dust jars are left? = 65 (E) · There were 92 paintbrushes. 16 were used up. How many paintbrushes are left? = 76 (R) · The Sorcerer found 4 magic apples yesterday and 53 more today. How many magic apples in all? = 57 (H) · The Sorcerer found 58 magic apples yesterday and 9 more today. How many magic apples in all? = 67 (A)

Clue 3 (Place value): "THE THIEF HATES THE SMELL OF APPLES"

What is the value of the 7 in 11,076? = 70 (T) · What is the value of the 2 in 770,245? = 200 (S) · What is the value of the 3 in 52,032? = 30 (A) · What is the value of the 7 in 44,752? = 700 (H) · What is the value of the 8 in 32,289? = 80 (L) · What is the value of the 3 in 49,350? = 300 (I) · What is the value of the 8 in 944,827? = 800 (O) · What is the value of the 9 in 69,785? = 9000 (F) · What is the value of the 4 in 59,493? = 400 (M) · What is the value of the 1 in 25,210? = 10 (E) · What is the value of the 2 in 112,849? = 2000 (P)

Clue 4 (Percentages): "SPARKLY BLUE HAIR WAS FOUND"

50% of 30 = 15 (S) · 10% of 340 = 34 (I) · 10% of 110 = 11 (B) · 5% of 560 = 28 (P) · 40% of 100 = 40 (L) · 50% of 54 = 27 (W) · 50% of 4 = 2 (O) · 60% of 50 = 30 (K) · 5% of 140 = 7 (N) · 25% of 12 = 3 (D) · 50% of 86 = 43 (F) · 5% of 380 = 19 (A) · 25% of 100 = 25 (E) · 50% of 74 = 37 (H) · 60% of 10 = 6 (U) · 20% of 115 = 23 (Y) · 10% of 180 = 18 (R)

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

$12 \div 2 = 6$ · $12 \div 4 = 3$ · $44 \div 4 = 11$ · $96 \div 8 = 12$ · $18 \div 2 = 9$ · $63 \div 9 = 7$ · $72 \div 9 = 8$ · $110 \div 11 = 10$ · $22 \div 11 = 2$ · $5 \div 1 = 5$ · $8 \div 2 = 4$