



The Golden Tuna Heist

Grade 6 math · Place value, Multiplication, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ Date: _____

The golden can of premium tuna has been stolen from the safe at the Purrfect Tuna Fish Factory! Only a clever cat burglar could have pulled off this heist. Detective Kitten is on the case to find the culprit.

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 cat burglar is _____

Possible suspects

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

NAME	SUPER SKILL	SECRET GADGET	ACTIVE PAW	FUR PATTERN	DISTRACTION
Simba	high jumping	fish launcher	left pawed	calico patch	crumpled paper
Bella	silent creeping	fish launcher	left pawed	sleek black	crumpled paper
Whiskers	wall climbing	catnip mist	right pawed	sleek black	crumpled paper
Tom	high jumping	laser pointer	right pawed	sleek black	crumpled paper
Cookie	laser dashing	yarn grappler	left pawed	sleek black	crumpled paper
Milo	super purring	bell silencer	left pawed	sleek black	warm sunlight
Oliver	wall climbing	bell silencer	right pawed	orange tabby	crumpled paper
Sylvester	silent creeping	bell silencer	left pawed	sleek black	crumpled paper
Smokey	silent creeping	catnip mist	left pawed	orange tabby	crumpled paper
Ziggy	wall climbing	laser pointer	left pawed	sleek black	squeaky mouse
Buster	high jumping	fish launcher	right pawed	calico patch	crumpled paper
Boots	silent creeping	bell silencer	right pawed	sleek black	squeaky mouse
Garfield	high jumping	fish launcher	left pawed	orange tabby	crumpled paper
Felix	silent creeping	bell silencer	left pawed	calico patch	crumpled paper
Shadow	wall climbing	fish launcher	left pawed	sleek black	squeaky mouse
Tiger	high jumping	laser pointer	left pawed	sleek black	crumpled paper
Chloe	super purring	catnip mist	left pawed	calico patch	crumpled paper
Luna	silent creeping	catnip mist	left pawed	sleek black	crumpled paper
Socks	laser dashing	catnip mist	left pawed	calico patch	warm sunlight
Gizmo	super purring	yarn grappler	right pawed	calico patch	squeaky mouse
Nala	laser dashing	yarn grappler	right pawed	orange tabby	crumpled paper

CLUE 1 Place value

The factory vault has a digital keypad. We examine the place value of the code digits to find the first clue.

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

What is the value of the 7 in 98,788?

What is the value of the 7 in 637,081?

A diagram consisting of a rectangular box on the left containing a question mark, followed by a right-pointing arrow, and then another rectangular box on the right containing the letter 'P'.

What is the value of the 5 in 405,238?

? → **A**

What is the value of the 4 in 86,849?

A diagram consisting of a rectangular box on the left, followed by a right-pointing arrow, and then another rectangular box on the right containing the letter 'R'.

What is the value of the 6 in 12,670?

A diagram showing a transformation. On the left is a rounded rectangle containing a question mark. An arrow points to the right, where there is a square containing the letter 'S'.

What is the value of the 6 in 916,242?

A diagram illustrating a transformation. On the left is a light blue rounded rectangle containing a large black question mark. An arrow points to the right, where a dark blue rounded rectangle contains the letter 'U'.

What is the value of the 9 in 22,944?

A diagram showing a transformation. On the left is a box containing a question mark. An arrow points to the right, where a box containing the letter 'H' is shown.

What is the value of the 3 in 772,397?

A diagram showing a box with an arrow pointing to a box labeled 'E'.

What is the value of the 2 in 560,210?

? →

What is the value of the 1 in 39,719?

A diagram showing a box with a question mark pointing to a box with the letter V.

What is the value of the 2 in 90,026?

A diagram showing a mapping from an empty box to a box labeled 'N'. An arrow points from an empty box on the left to a box containing the letter 'N' on the right.

What is the value of the 5 in 791,853?



What is the value of the 3 in 253,580?

?  $\rightarrow$ 

What is the value of the 6 in 57,465?

A diagram illustrating a transformation. On the left is a simple rectangular box. An arrow points to the right, where a more complex box is shown. This second box has a thick border and contains the letter 'L' in a bold, black font.

What is the value of the 1 in 923,179?

? → **D**

What is the value of the 8 in 628,353?

? → **G**

Scratch space:

Multiplication facts (1-12)

We find stacks of fish crate boxes organized in rows. Multiplying the rows gives us a clue about the thief.

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

Diagram illustrating the sequence of operations and values for the first row of the algorithm:

- Initial values: 50, 70, 35
- Operation 1: $50 \times 2 = 100$ (marked with 'T')
- Operation 2: $100 \times 2 = 200$
- Operation 3: $200 \times 2 = 400$
- Operation 4: $400 \times 2 = 800$
- Operation 5: $800 \times 2 = 1600$
- Operation 6: $1600 \times 2 = 3200$
- Operation 7: $3200 \times 2 = 6400$ (marked with 'T')
- Operation 8: $6400 \times 2 = 12800$
- Operation 9: $12800 \times 2 = 25600$
- Operation 10: $25600 \times 2 = 51200$
- Operation 11: $51200 \times 2 = 102400$
- Operation 12: $102400 \times 2 = 204800$
- Operation 13: $204800 \times 2 = 409600$
- Operation 14: $409600 \times 2 = 819200$
- Operation 15: $819200 \times 2 = 1638400$
- Operation 16: $1638400 \times 2 = 3276800$
- Operation 17: $3276800 \times 2 = 6553600$
- Operation 18: $6553600 \times 2 = 13107200$
- Operation 19: $13107200 \times 2 = 26214400$
- Operation 20: $26214400 \times 2 = 52428800$
- Operation 21: $52428800 \times 2 = 104857600$
- Operation 22: $104857600 \times 2 = 209715200$
- Operation 23: $209715200 \times 2 = 419430400$
- Operation 24: $419430400 \times 2 = 838860800$
- Operation 25: $838860800 \times 2 = 1677721600$
- Operation 26: $1677721600 \times 2 = 3355443200$
- Operation 27: $3355443200 \times 2 = 6710886400$
- Operation 28: $6710886400 \times 2 = 13421772800$
- Operation 29: $13421772800 \times 2 = 26843545600$
- Operation 30: $26843545600 \times 2 = 53687091200$
- Operation 31: $53687091200 \times 2 = 107374182400$
- Operation 32: $107374182400 \times 2 = 214748364800$
- Operation 33: $214748364800 \times 2 = 429496729600$
- Operation 34: $429496729600 \times 2 = 858993459200$
- Operation 35: $858993459200 \times 2 = 1717986918400$
- Operation 36: $1717986918400 \times 2 = 3435973836800$
- Operation 37: $3435973836800 \times 2 = 6871947673600$
- Operation 38: $6871947673600 \times 2 = 13743895347200$
- Operation 39: $13743895347200 \times 2 = 27487790694400$
- Operation 40: $27487790694400 \times 2 = 54975581388800$
- Operation 41: $54975581388800 \times 2 = 109951162777600$
- Operation 42: $109951162777600 \times 2 = 219902325555200$
- Operation 43: $219902325555200 \times 2 = 439804651110400$
- Operation 44: $439804651110400 \times 2 = 879609302220800$
- Operation 45: $879609302220800 \times 2 = 1759218604441600$
- Operation 46: $1759218604441600 \times 2 = 3518437208883200$
- Operation 47: $3518437208883200 \times 2 = 7036874417766400$
- Operation 48: $7036874417766400 \times 2 = 14073748835532800$
- Operation 49: $14073748835532800 \times 2 = 28147497671065600$
- Operation 50: $28147497671065600 \times 2 = 56294995342131200$
- Operation 51: $56294995342131200 \times 2 = 112589990684262400$
- Operation 52: $112589990684262400 \times 2 = 225179981368524800$
- Operation 53: $225179981368524800 \times 2 = 450359962737049600$
- Operation 54: $450359962737049600 \times 2 = 900719925474099200$
- Operation 55: $900719925474099200 \times 2 = 1801439850948198400$
- Operation 56: $1801439850948198400 \times 2 = 3602879701896396800$
- Operation 57: $3602879701896396800 \times 2 = 7205759403792793600$
- Operation 58: $7205759403792793600 \times 2 = 14411518807585587200$
- Operation 59: $14411518807585587200 \times 2 = 28823037615171174400$
- Operation 60: $28823037615171174400 \times 2 = 57646075230342348800$
- Operation 61: $57646075230342348800 \times 2 = 115292150460684697600$
- Operation 62: $115292150460684697600 \times 2 = 230584300921369395200$
- Operation 63: $230584300921369395200 \times 2 = 461168601842738790400$
- Operation 64: $461168601842738790400 \times 2 = 922337203685477580800$
- Operation 65: $922337203685477580800 \times 2 = 1844674407370955161600$
- Operation 66: $1844674407370955161600 \times 2 = 3689348814741910323200$
- Operation 67: $3689348814741910323200 \times 2 = 7378697629483820646400$
- Operation 68: $7378697629483820646400 \times 2 = 14757395258967641292800$
- Operation 69: $14757395258967641292800 \times 2 = 29514790517935282585600$
- Operation 70: $29514790517935282585600 \times 2 = 59029581035870565171200$
- Operation 71: $59029581035870565171200 \times 2 = 118059162071741130342400$
- Operation 72: $118059162071741130342400 \times 2 = 236118324143482260684800$
- Operation 73: $236118324143482260684800 \times 2 = 472236648286964521369600$
- Operation 74: $472236648286964521369600 \times 2 = 944473296573929042739200$
- Operation 75: $944473296573929042739200 \times 2 = 1888946593147858085478400$
- Operation 76: $1888946593147858085478400 \times 2 = 3777893186295716170956800$
- Operation 77: $3777893186295716170956800 \times 2 = 7555786372591432341913600$
- Operation 78: $7555786372591432341913600 \times 2 = 15111572745182864683827200$

$10 \times 5 = \boxed{} \rightarrow \boxed{\text{T}}$

$3 \times 12 = \square \rightarrow \boxed{\mathbf{W}}$

$6 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{S}}$

$$5 \times 9 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$10 \times 4 = \boxed{} \rightarrow \boxed{\text{L}}$$

$3 \times 7 = \square \rightarrow \boxed{\mathbf{P}}$

$10 \times 7 = \boxed{} \rightarrow \boxed{\text{H}}$

$$5 \times 2 = \boxed{} \rightarrow \boxed{1}$$

$$10 \times 12 = \boxed{} \rightarrow \boxed{\text{U}}$$

$11 \times 1 = \square \rightarrow \mathbf{F}$

$$1 \times 9 = \boxed{} \rightarrow \boxed{\mathbf{R}}$$

$5 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{E}}$

$11 \times 12 = \square \rightarrow \mathbf{A}$

Scratch space:

CLUE 3 Addition

We count the spilled toy mice on the floor. Adding them all up reveals another piece of evidence.

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

T															T			
5403	5979	6071	8169	8535	4706	4706	5149	8535	3357	5345	5149	3357	3357	2510	5403			
					T													
3152	6071	4351	8535	4351	5403	5345	3152	9833	6480	5430	4706	6071	4324	5430	5149	5430	6071	3152

$3596 + 1807 = \square \rightarrow \text{T}$	$1745 + 1407 = \square \rightarrow \text{R}$	$2791 + 1560 = \square \rightarrow \text{S}$
$4823 + 5010 = \square \rightarrow \text{U}$	$1780 + 1577 = \square \rightarrow \text{N}$	$2313 + 3666 = \square \rightarrow \text{H}$
$3697 + 4838 = \square \rightarrow \text{I}$	$1640 + 3066 = \square \rightarrow \text{L}$	$2102 + 3047 = \square \rightarrow \text{A}$
$2136 + 2188 = \square \rightarrow \text{D}$	$4089 + 1982 = \square \rightarrow \text{E}$	$2159 + 3186 = \square \rightarrow \text{C}$
$1499 + 1011 = \square \rightarrow \text{O}$	$3297 + 3183 = \square \rightarrow \text{M}$	$2423 + 3007 = \square \rightarrow \text{P}$
$4776 + 3393 = \square \rightarrow \text{V}$		

Scratch space:

CLUE 4

Subtraction

The thief took some catnip bags from the shelf. Subtracting the missing bags from the total shows us a new clue.

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

L							L					L							
4947	1555	1555	2246	1526	2246	4947	1526	1526	8536	2805	4947	5480	4191	8536	6241	5502	4641		
						L													
5148	5480	2246	4947	1526	6241	5013	2805	1526	3783	7802	2740	5459							

$8387 - 3440 = \square \rightarrow \boxed{\text{L}}$

$10712 - 4471 = \square \rightarrow \boxed{\text{F}}$

$6320 - 3580 = \square \rightarrow \boxed{\text{N}}$

$3182 - 1627 = \square \rightarrow \boxed{\text{O}}$

$4459 - 2213 = \square \rightarrow \boxed{\text{S}}$

$7156 - 2008 = \square \rightarrow \boxed{\text{W}}$

$3466 - 1940 = \square \rightarrow \boxed{\text{E}}$

$8436 - 2934 = \square \rightarrow \boxed{\text{U}}$

$6370 - 3565 = \square \rightarrow \boxed{\text{B}}$

$9940 - 2138 = \square \rightarrow \boxed{\text{I}}$

$6930 - 2739 = \square \rightarrow \boxed{\text{C}}$

$6767 - 2984 = \square \rightarrow \boxed{\text{H}}$

$10181 - 1645 = \square \rightarrow \boxed{\text{K}}$

$6703 - 1223 = \square \rightarrow \boxed{\text{A}}$

$9045 - 3586 = \square \rightarrow \boxed{\text{D}}$

$7374 - 2733 = \square \rightarrow \boxed{\text{R}}$

$6850 - 1837 = \square \rightarrow \boxed{\text{T}}$

Scratch space:

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

We divide a pile of golden fish biscuits equally among the witness kittens to hear their 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:

$55 \div 11 = \square$

$36 \div 9 = \square$

$12 \div 4 = \square$

$24 \div 2 = \square$

$8 \div 1 = \square$

$60 \div 6 = \square$

$77 \div 7 = \square$

$4 \div 2 = \square$

$99 \div 11 = \square$

$6 \div 6 = \square$

$66 \div 11 = \square$

Step 2 - cross out the sentence with each answer:

1. The villain climbs up the brick wall, then sprays a cloud of catnip mist.
2. The villain dashes through the laser grid, then escapes using a yarn grappler.
3. The villain jumps over the high fence, then shines a distracting laser pointer.
4. The villain creeps past the sleeping guard dog, then quiets their collar with a bell silencer.
5. The villain creeps past the sleeping guard dog, then creates a distraction with a fish launcher.
6. The villain jumps over the high fence, then sprays a cloud of catnip mist.
7. The villain creeps past the sleeping guard dog, then sprays a cloud of catnip mist.
8. The villain purrs to disable the alarm, then quiets their collar with a bell silencer.
9. The villain dashes through the laser grid, then sprays a cloud of catnip mist.
10. The villain purrs to disable the alarm, then shines a distracting laser pointer.
11. The villain dashes through the laser grid, then creates a distraction with a fish launcher.
12. The villain jumps over the high fence, then creates a distraction with a fish launcher.

Answer Key

The Golden Tuna Heist

Culprit: Luna

silent creeping · catnip mist · left pawed · sleek black · crumpled paper

Trail: Start 21 → Clue 1 18 → Clue 2 13 → Clue 3 9 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE THE YARN GRAPPLER"

What is the value of the 7 in 98,788? = 700 (T) · What is the value of the 7 in 637,081? = 7000 (P) · What is the value of the 5 in 405,238? = 5000 (A) · What is the value of the 4 in 86,849? = 40 (R) · What is the value of the 6 in 12,670? = 600 (S) · What is the value of the 6 in 916,242? = 6000 (U) · What is the value of the 9 in 22,944? = 900 (H) · What is the value of the 3 in 772,397? = 300 (E) · What is the value of the 2 in 560,210? = 200 (O) · What is the value of the 1 in 39,719? = 10 (V) · What is the value of the 2 in 90,026? = 20 (N) · What is the value of the 5 in 791,853? = 50 (Y) · What is the value of the 3 in 253,580? = 3000 (I) · What is the value of the 6 in 57,465? = 60 (L) · What is the value of the 1 in 923,179? = 100 (D) · What is the value of the 8 in 628,353? = 8000 (G)

Clue 2 (Multiplication facts (1-12)): "THE CULPRIT SWIPES WITH THE LEFT PAW"

$10 \times 5 = 50$ (T) · $3 \times 12 = 36$ (W) · $6 \times 8 = 48$ (S) · $5 \times 9 = 45$ (C) · $10 \times 4 = 40$ (L) · $3 \times 7 = 21$ (P) · $10 \times 7 = 70$ (H) · $5 \times 2 = 10$ (I) · $10 \times 12 = 120$ (U) · $11 \times 1 = 11$ (F) · $1 \times 9 = 9$ (R) · $5 \times 7 = 35$ (E) · $11 \times 12 = 132$ (A)

Clue 3 (Addition): "THE VILLAIN CANNOT RESIST CRUMPLED PAPER"

$3596 + 1807 = 5403$ (T) · $1745 + 1407 = 3152$ (R) · $2791 + 1560 = 4351$ (S) · $4823 + 5010 = 9833$ (U) · $1780 + 1577 = 3357$ (N) · $2313 + 3666 = 5979$ (H) · $3697 + 4838 = 8535$ (I) · $1640 + 3066 = 4706$ (L) · $2102 + 3047 = 5149$ (A) · $2136 + 2188 = 4324$ (D) · $4089 + 1982 = 6071$ (E) · $2159 + 3186 = 5345$ (C) · $1499 + 1011 = 2510$ (O) · $3297 + 3183 = 6480$ (M) · $2423 + 3007 = 5430$ (P) · $4776 + 3393 = 8169$ (V)

Clue 4 (Subtraction): "LOOSE SLEEK BLACK FUR WAS LEFT BEHIND"

$8387 - 3440 = 4947$ (L) · $10712 - 4471 = 6241$ (F) · $6320 - 3580 = 2740$ (N) · $3182 - 1627 = 1555$ (O) · $4459 - 2213 = 2246$ (S) · $7156 - 2008 = 5148$ (W) · $3466 - 1940 = 1526$ (E) · $8436 - 2934 = 5502$ (U) · $6370 - 3565 = 2805$ (B) · $9940 - 2138 = 7802$ (I) · $6930 - 2739 = 4191$ (C) · $6767 - 2984 = 3783$ (H) · $10181 - 1645 = 8536$ (K) · $6703 - 1223 = 5480$ (A) · $9045 - 3586 = 5459$ (D) · $7374 - 2733 = 4641$ (R) · $6850 - 1837 = 5013$ (T)

Clue 5 (Division facts (1-12)): surviving statement is box 7 → Luna

$55 \div 11 = 5$ · $36 \div 9 = 4$ · $12 \div 4 = 3$ · $24 \div 2 = 12$ · $8 \div 1 = 8$ · $60 \div 6 = 10$ · $77 \div 7 = 11$ · $4 \div 2 = 2$ · $99 \div 11 = 9$ · $6 \div 6 = 1$ · $66 \div 11 = 6$