



The Purr Palace Capers

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

Detective: _____ Date: _____

Oh no! The Golden Fish-Bone Trophy has vanished right before the final vote! The Purr Palace Cat Show is in big trouble. Inspector Whiskers needs your help to find the sneaky catburglar before they escape!

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 catburglar is _____

Possible suspects

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

NAME	SPECIAL SKILL	SNEAKY TOOL	FAVORITE PAW	FUR PATTERN	DISTRACTION
Lucky	yarn tangled	fake mouse	left-pawed	solid black	squeaky toy
Simba	yarn tangled	box trap	left-pawed	solid black	crinkly paper
Felix	silent purring	catnip mist	right-pawed	calico patches	squeaky toy
Tiger	yarn tangled	feather wand	right-pawed	calico patches	crinkly paper
Fluffy	super leap	box trap	left-pawed	tabby stripes	shaken treats
Sylvester	silent purring	laser pointer	left-pawed	solid black	shaken treats
Mittens	high climbing	laser pointer	left-pawed	tabby stripes	shaken treats
Pusheen	carpet scratching	laser pointer	right-pawed	calico patches	squeaky toy
Cleo	super leap	feather wand	left-pawed	solid black	crinkly paper
Oliver	high climbing	box trap	right-pawed	calico patches	shaken treats
Shadow	silent purring	feather wand	right-pawed	tabby stripes	squeaky toy
Gizmo	yarn tangled	feather wand	left-pawed	calico patches	squeaky toy
Smokey	high climbing	fake mouse	right-pawed	calico patches	squeaky toy
Morris	yarn tangled	feather wand	right-pawed	calico patches	squeaky toy
Peanut	yarn tangled	box trap	left-pawed	calico patches	crinkly paper
Tom	super leap	fake mouse	left-pawed	calico patches	shaken treats
Socks	yarn tangled	laser pointer	left-pawed	calico patches	squeaky toy
Garfield	super leap	laser pointer	right-pawed	tabby stripes	squeaky toy
Whiskers	super leap	laser pointer	left-pawed	tabby stripes	squeaky toy
Luna	yarn tangled	laser pointer	left-pawed	solid black	squeaky toy
Bella	yarn tangled	catnip mist	right-pawed	calico patches	squeaky toy

CLUE 1 Rounding

Inspector Whiskers checks the digital laser radar but it only shows the distance rounded to the nearest ten

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

T																T
2300	1300	430	290	4300	300	300	3000	4300	50	90	370	430	900	50	370	2300

			T					T								
2900	900	430	2300	1300	430	1700	430	3000	2300	1300	430	5000	20	3000	50	90

Round 2,256 to the nearest hundred → **T**

Round 90 to the nearest ten → **D**

Round 426 to the nearest ten → **E**

Round 293 to the nearest hundred → **L**

Round 1,340 to the nearest hundred → **H**

Round 21 to the nearest ten → **W**

Round 289 to the nearest ten → **V**

Round 4,551 to the nearest thousand → **R**

Round 2,735 to the nearest thousand → **A**

Round 1,697 to the nearest hundred → **F**

Round 872 to the nearest hundred → **S**

Round 2,927 to the nearest hundred → **U**

Round 4,253 to the nearest hundred → **I**

Round 51 to the nearest ten → **N**

Round 368 to the nearest ten → **O**

Scratch space:

Addition

We count the spilled tuna cans and the wet food pouches to find how many total snacks the thief knocked over

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

Diagram showing the arrangement of 20 numbered boxes in two rows. The top row has 15 boxes, and the bottom row has 5 boxes. Boxes are numbered 4460, 2848, 9735, 4029, 5512, 4029, 2004, 9735, 5320, 4460, 5512, 4029, 9735, 4029, 4460, 2848, 9735, 4322, 5550, 8055, 2848, 4460, 2004, 6623, 5866. Boxes with the number 4460 are highlighted in orange and labeled with a 'T'.

$$3012 + 1448 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$2838 + 3785 = \boxed{} \rightarrow \boxed{\text{A}}$$

$3841 + 5894 = \boxed{} \rightarrow \boxed{\text{E}}$

$$3223 + 2327 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$1826 + 3686 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$953 + 1895 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$2725 + 5330 = \boxed{} \rightarrow \boxed{\mathbf{G}}$$

$$2835 + 3031 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$2772 + 2548 = \boxed{} \rightarrow \boxed{\text{C}}$$

$1199 + 805 = \boxed{} \rightarrow \boxed{\text{P}}$

$$1746 + 2576 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$2531 + 1498 = \boxed{} \rightarrow \boxed{\text{S}}$$

Scratch space:

CLUE 3

Subtraction

The inspector measures the scratch marks on the rug and subtracts the normal claw sizes to see the difference

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

T 7148	8171	6431	2243	1080	3084	1560	3084	7278	3084	2243	2538	1080	2478	5747	T 7148	8171	6431
2330	7967	8186	6431	3084	8300	2243	T 7148	2478	2243								

$10642 - 3494 = \square \rightarrow \text{T}$	$6265 - 3727 = \square \rightarrow \text{F}$	$7514 - 4430 = \square \rightarrow \text{A}$
$4586 - 2256 = \square \rightarrow \text{S}$	$10584 - 2617 = \square \rightarrow \text{Q}$	$9311 - 3564 = \square \rightarrow \text{M}$
$4691 - 3131 = \square \rightarrow \text{N}$	$8229 - 43 = \square \rightarrow \text{U}$	$2499 - 21 = \square \rightarrow \text{O}$
$8790 - 1512 = \square \rightarrow \text{W}$	$5434 - 4354 = \square \rightarrow \text{R}$	$3142 - 899 = \square \rightarrow \text{Y}$
$8822 - 522 = \square \rightarrow \text{K}$	$8209 - 1778 = \square \rightarrow \text{E}$	$10698 - 2527 = \square \rightarrow \text{H}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

The suspect ran across several rows of clean cat beds leaving footprints in equal groups on each row

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

T																
9	100	121	60	121	42	60	121	66	42	120	132	66	64			
		T							T	T						
36	42	9	66	100	121	2	42	9	9	100	121	2	66	121	49	121

$3 \times 3 = \square \rightarrow \boxed{\text{T}}$

$7 \times 6 = \square \rightarrow \boxed{\text{A}}$

$11 \times 6 = \square \rightarrow \boxed{\text{C}}$

$11 \times 12 = \square \rightarrow \boxed{\text{I}}$

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

$10 \times 6 = \square \rightarrow \boxed{\text{R}}$

$12 \times 3 = \square \rightarrow \boxed{\text{P}}$

$12 \times 10 = \square \rightarrow \boxed{\text{L}}$

$11 \times 11 = \square \rightarrow \boxed{\text{E}}$

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

$7 \times 7 = \square \rightarrow \boxed{\text{N}}$

$8 \times 8 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

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

A box of shiny collar bells was knocked over and the spilled toys were split evenly among the clean-up kittens

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:

$36 \div 12 = \boxed{}$

$96 \div 12 = \boxed{}$

$28 \div 4 = \boxed{}$

$14 \div 7 = \boxed{}$

$8 \div 8 = \boxed{}$

$77 \div 7 = \boxed{}$

$16 \div 4 = \boxed{}$

$18 \div 3 = \boxed{}$

$81 \div 9 = \boxed{}$

$40 \div 4 = \boxed{}$

$72 \div 6 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain scratches the judge's favorite chair, then hides inside a tiny cardboard box.
2. The villain leaps over the velvet barrier, then tosses a squeaking fake mouse.
3. The villain tangles the wool yarn, then sprays catnip mist to escape.
4. The villain tangles the wool yarn, then waves a fancy feather wand.
5. The villain climbs up the giant cat tree, then tosses a squeaking fake mouse.
6. The villain purrs so quietly nobody hears, then tosses a squeaking fake mouse.
7. The villain scratches the judge's favorite chair, then flashes a bright laser pointer.
8. The villain purrs so quietly nobody hears, then sprays catnip mist to escape.
9. The villain leaps over the velvet barrier, then sprays catnip mist to escape.
10. The villain scratches the judge's favorite chair, then sprays catnip mist to escape.
11. The villain tangles the wool yarn, then tosses a squeaking fake mouse.
12. The villain purrs so quietly nobody hears, then waves a fancy feather wand.

Answer Key

The Purr Palace Capers

Culprit: Smokey

high climbing · fake mouse · right-pawed · calico patches · squeaky toy

Trail: Start 21 → Clue 1 16 → Clue 2 6 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT USE THE FEATHER WAND"

Round 2,256 to the nearest hundred = 2300 (T) · Round 90 to the nearest ten = 90 (D) · Round 426 to the nearest ten = 430 (E) · Round 293 to the nearest hundred = 300 (L) · Round 1,340 to the nearest hundred = 1300 (H) · Round 21 to the nearest ten = 20 (W) · Round 289 to the nearest ten = 290 (V) · Round 4,551 to the nearest thousand = 5000 (R) · Round 2,735 to the nearest thousand = 3000 (A) · Round 1,697 to the nearest hundred = 1700 (F) · Round 872 to the nearest hundred = 900 (S) · Round 2,927 to the nearest hundred = 2900 (U) · Round 4,253 to the nearest hundred = 4300 (I) · Round 51 to the nearest ten = 50 (N) · Round 368 to the nearest ten = 370 (O)

Clue 2 (Addition): "THE SUSPECT USES THE RIGHT PAW"

$3012 + 1448 = 4460$ (T) · $2838 + 3785 = 6623$ (A) · $3841 + 5894 = 9735$ (E) · $3223 + 2327 = 5550$ (I) · $1826 + 3686 = 5512$ (U) · $953 + 1895 = 2848$ (H) · $2725 + 5330 = 8055$ (G) · $2835 + 3031 = 5866$ (W) · $2772 + 2548 = 5320$ (C) · $1199 + 805 = 2004$ (P) · $1746 + 2576 = 4322$ (R) · $2531 + 1498 = 4029$ (S)

Clue 3 (Subtraction): "THEY RAN AWAY FROM THE SQUEAKY TOY"

$10642 - 3494 = 7148$ (T) · $6265 - 3727 = 2538$ (F) · $7514 - 4430 = 3084$ (A) · $4586 - 2256 = 2330$ (S) · $10584 - 2617 = 7967$ (Q) · $9311 - 3564 = 5747$ (M) · $4691 - 3131 = 1560$ (N) · $8229 - 43 = 8186$ (U) · $2499 - 21 = 2478$ (O) · $8790 - 1512 = 7278$ (W) · $5434 - 4354 = 1080$ (R) · $3142 - 899 = 2243$ (Y) · $8822 - 522 = 8300$ (K) · $8209 - 1778 = 6431$ (E) · $10698 - 2527 = 8171$ (H)

Clue 4 (Multiplication facts (1-12)): "THERE ARE CALICO PATCHES AT THE SCENE"

$3 \times 3 = 9$ (T) · $7 \times 6 = 42$ (A) · $11 \times 6 = 66$ (C) · $11 \times 12 = 132$ (I) · $1 \times 2 = 2$ (S) · $10 \times 6 = 60$ (R) · $12 \times 3 = 36$ (P) · $12 \times 10 = 120$ (L) · $11 \times 11 = 121$ (E) · $10 \times 10 = 100$ (H) · $7 \times 7 = 49$ (N) · $8 \times 8 = 64$ (O)

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

$36 \div 12 = 3$ · $96 \div 12 = 8$ · $28 \div 4 = 7$ · $14 \div 7 = 2$ · $8 \div 8 = 1$ · $77 \div 7 = 11$ · $16 \div 4 = 4$ · $18 \div 3 = 6$ · $81 \div 9 = 9$ · $40 \div 4 = 10$ · $72 \div 6 = 12$