The Great Purrville Diamond Caper

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

Detective: _____ **Date:** _____

Someone snatched the Golden Mouse Statue from the museum! The intruder left behind soft fur and strange clues. Detective Whiskers needs your help to crack the case.

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.

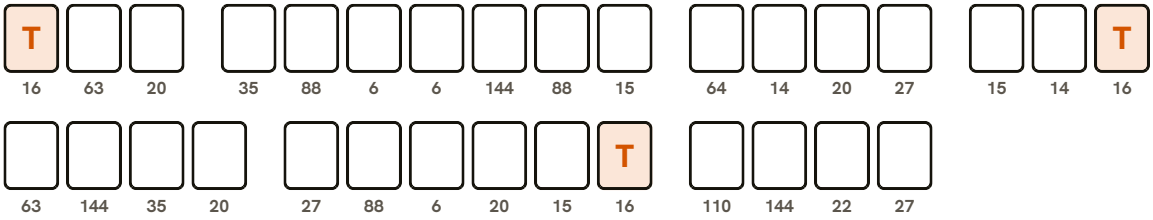
NAME	SPECIAL GADGET	SECRET SKILL	PAW PREFERENCE	FUR COLOR	WEAKNESS
Shadow	Feather Wand	Wall Climb	Left Paws	Black Fur	Cardboard Boxes
Sylvester	Smoke Bomb	High Jump	Left Paws	Calico Fur	Cardboard Boxes
Luna	Feather Wand	Speed Dash	Right Paws	Calico Fur	Cardboard Boxes
Cleo	Grappling Hook	Silent Paws	Right Paws	Calico Fur	Cardboard Boxes
Simba	Feather Wand	High Jump	Right Paws	Calico Fur	Cardboard Boxes
Nala	Feather Wand	Speed Dash	Right Paws	Calico Fur	Milk Saucers
Peanut	Feather Wand	Night Vision	Right Paws	Ginger Fur	Squeaky Toys
Jasper	Catnip Bomb	High Jump	Left Paws	Calico Fur	Cardboard Boxes
Ziggy	Smoke Bomb	Wall Climb	Right Paws	Calico Fur	Cardboard Boxes
Mochi	Grappling Hook	Night Vision	Right Paws	Ginger Fur	Squeaky Toys
Oreo	Smoke Bomb	High Jump	Right Paws	Calico Fur	Cardboard Boxes
Bella	Laser Pointer	Night Vision	Right Paws	Calico Fur	Squeaky Toys
Tom	Catnip Bomb	Night Vision	Right Paws	Ginger Fur	Squeaky Toys
Mittens	Smoke Bomb	Night Vision	Left Paws	Calico Fur	Cardboard Boxes
Oliver	Laser Pointer	Wall Climb	Right Paws	Calico Fur	Squeaky Toys
Boots	Smoke Bomb	Night Vision	Right Paws	Ginger Fur	Cardboard Boxes
Garfield	Smoke Bomb	Speed Dash	Left Paws	Calico Fur	Milk Saucers
Loki	Feather Wand	Speed Dash	Right Paws	Ginger Fur	Cardboard Boxes
Milo	Grappling Hook	Night Vision	Left Paws	Black Fur	Cardboard Boxes
Smokey	Smoke Bomb	Speed Dash	Right Paws	Ginger Fur	Cardboard Boxes
Tiger	Grappling Hook	Speed Dash	Left Paws	Ginger Fur	Milk Saucers

make your own at mathcrackers.com

CLUE 1 Multiplication facts (1-12)

> To decrypt the laser security log, count the total beam triggers arranged in equal rows across the museum hall.

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



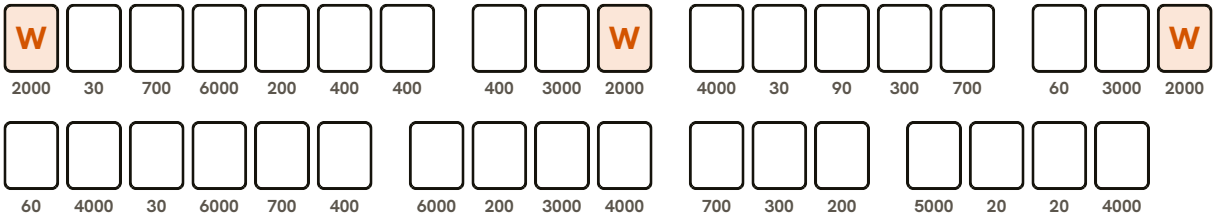
2 × 8 = ☐ → T	11 × 10 = ☐ → P	5 × 3 = ☐ → N
7 × 9 = ☐ → H	1 × 6 = ☐ → L	7 × 5 = ☐ → V
12 × 12 = ☐ → A	9 × 3 = ☐ → S	8 × 8 = ☐ → D
2 × 7 = ☐ → O	2 × 11 = ☐ → W	11 × 8 = ☐ → I
2 × 10 = ☐ → E		

Scratch space:

CLUE 2 Rounding

The museum scale registered the thief's weight, but the digital display rounded the number to the nearest ten.

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



Round 1,953 to the nearest thousand ☐ → W

Round 5,230 to the nearest thousand ☐ → D

Round 228 to the nearest hundred ☐ → E

Round 62 to the nearest ten ☐ → P

Round 363 to the nearest hundred ☐ → S

Round 88 to the nearest ten ☐ → G

Round 700 to the nearest hundred ☐ → T

Round 5,662 to the nearest thousand ☐ → N

Round 3,569 to the nearest thousand ☐ → R

Round 19 to the nearest ten ☐ → O

Round 26 to the nearest ten ☐ → I

Round 339 to the nearest hundred ☐ → H

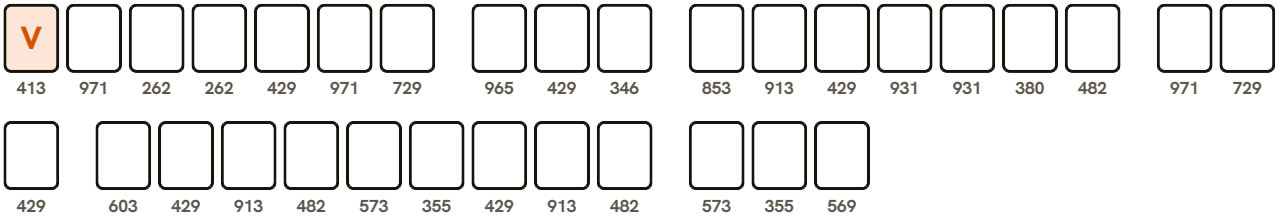
Round 3,298 to the nearest thousand ☐ → A

Scratch space:

CLUE 3 Addition

Officer Whiskers gathered all the catnip treats dropped along the escape trail and tallied them together.

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



196 + 217 = ☐ → V

532 + 399 = ☐ → P

460 + 393 = ☐ → T

163 + 99 = ☐ → L

116 + 230 = ☐ → S

441 + 288 = ☐ → N

355 + 610 = ☐ → W

163 + 319 = ☐ → D

139 + 216 = ☐ → O

532 + 381 = ☐ → R

332 + 241 = ☐ → B

338 + 231 = ☐ → X

258 + 171 = ☐ → A

386 + 585 = ☐ → I

217 + 163 = ☐ → E

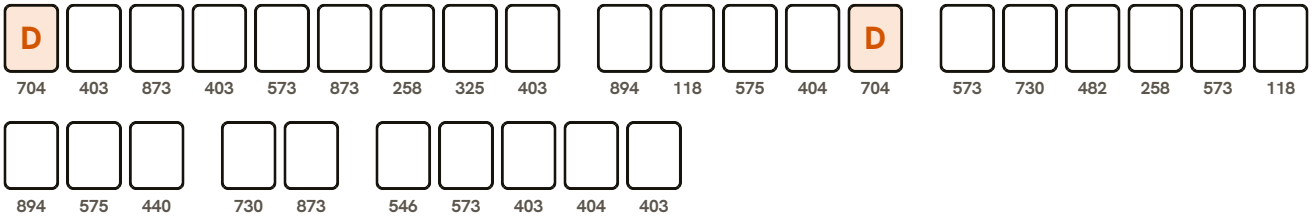
386 + 217 = ☐ → C

Scratch space:

CLUE 4 Subtraction

The guards compared the total number of cat toys in the vault before and after the robbery to find the difference.

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



998 - 294 = ☐ → D

526 - 86 = ☐ → R

748 - 345 = ☐ → E

971 - 398 = ☐ → C

1062 - 168 = ☐ → F

365 - 247 = ☐ → O

334 - 76 = ☐ → I

1140 - 267 = ☐ → T

526 - 201 = ☐ → V

859 - 284 = ☐ → U

452 - 48 = ☐ → N

758 - 276 = ☐ → L

780 - 50 = ☐ → A

861 - 315 = ☐ → S

Scratch space:

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

To share the recovered clue cards equally among the detective teams, divide them into equal groups.

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 ÷ 4 = ☐	84 ÷ 7 = ☐	72 ÷ 9 = ☐	10 ÷ 1 = ☐	3 ÷ 1 = ☐
44 ÷ 4 = ☐	40 ÷ 10 = ☐	10 ÷ 10 = ☐	9 ÷ 1 = ☐	77 ÷ 11 = ☐
10 ÷ 5 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain waved a shiny feather wand, then navigated the dark room using night vision.
2. The villain distracted the guards with a laser pointer, then snuck past quietly using silent paws.
3. The villain waved a shiny feather wand, then snuck past quietly using silent paws.
4. The villain waved a shiny feather wand, then scrambled up the wall using wall climb.
5. The villain waved a shiny feather wand, then sprinted away using a speed dash.
6. The villain vanished behind a thick smoke bomb, then scrambled up the wall using wall climb.
7. The villain tossed a smelly catnip bomb, then sprinted away using a speed dash.
8. The villain vanished behind a thick smoke bomb, then cleared the high fence with a high jump.
9. The villain distracted the guards with a laser pointer, then scrambled up the wall using wall climb.
10. The villain swung across the hall with a grappling hook, then cleared the high fence with a high jump.
11. The villain tossed a smelly catnip bomb, then cleared the high fence with a high jump.
12. The villain waved a shiny feather wand, then cleared the high fence with a high jump.

TEACHER / PARENT

Answer Key

The Great Purrville Diamond Caper

Culprit: Luna

Feather Wand · Speed Dash · Right Paws · Calico Fur · Cardboard Boxes

Trail: Start 21 → Clue 1 20 → Clue 2 13 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT HAVE SILENT PAWS"

2 × 8 = 16 (T) · 11 × 10 = 110 (P) · 5 × 3 = 15 (N) · 7 × 9 = 63 (H) · 1 × 6 = 6 (L) · 7 × 5 = 35 (V) · 12 × 12 = 144 (A) · 9 × 3 = 27 (S) · 8 × 8 = 64 (D) · 2 × 7 = 14 (O) · 2 × 11 = 22 (W) · 11 × 8 = 88 (I) · 2 × 10 = 20 (E)

Clue 2 (Rounding): "WITNESS SAW RIGHT PAW PRINTS NEAR THE DOOR"

Round 1,953 to the nearest thousand = 2000 (W) · Round 5,230 to the nearest thousand = 5000 (D) · Round 228 to the nearest hundred = 200 (E) · Round 62 to the nearest ten = 60 (P) · Round 363 to the nearest hundred = 400 (S) · Round 88 to the nearest ten = 90 (G) · Round 700 to the nearest hundred = 700 (T) · Round 5,662 to the nearest thousand = 6000 (N) · Round 3,569 to the nearest thousand = 4000 (R) · Round 19 to the nearest ten = 20 (O) · Round 26 to the nearest ten = 30 (I) · Round 339 to the nearest hundred = 300 (H) · Round 3,298 to the nearest thousand = 3000 (A)

Clue 3 (Addition): "VILLAIN WAS TRAPPED IN A CARDBOARD BOX"

196 + 217 = 413 (V) · 532 + 399 = 931 (P) · 460 + 393 = 853 (T) · 163 + 99 = 262 (L) · 116 + 230 = 346 (S) · 441 + 288 = 729 (N) · 355 + 610 = 965 (W) · 163 + 319 = 482 (D) · 139 + 216 = 355 (O) · 532 + 381 = 913 (R) · 332 + 241 = 573 (B) · 338 + 231 = 569 (X) · 258 + 171 = 429 (A) · 386 + 585 = 971 (I) · 217 + 163 = 380 (E) · 386 + 217 = 603 (C)

Clue 4 (Subtraction): "DETECTIVE FOUND CALICO FUR AT SCENE"

998 - 294 = 704 (D) · 526 - 86 = 440 (R) · 748 - 345 = 403 (E) · 971 - 398 = 573 (C) · 1062 - 168 = 894 (F) · 365 - 247 = 118 (O) · 334 - 76 = 258 (I) · 1140 - 267 = 873 (T) · 526 - 201 = 325 (V) · 859 - 284 = 575 (U) · 452 - 48 = 404 (N) · 758 - 276 = 482 (L) · 780 - 50 = 730 (A) · 861 - 315 = 546 (S)

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

24 ÷ 4 = 6 · 84 ÷ 7 = 12 · 72 ÷ 9 = 8 · 10 ÷ 1 = 10 · 3 ÷ 1 = 3 · 44 ÷ 4 = 11 · 40 ÷ 10 = 4 · 10 ÷ 10 = 1 · 9 ÷ 1 = 9 · 77 ÷ 11 = 7 · 10 ÷ 5 = 2