



The Case of the Missing Tiara

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

Detective: _____ Date: _____

The Grand Headmistress's magical glass tiara has been stolen right out of the high tower! The sneaky thief left a trail of magical glitter behind. We must use our royal detective skills to find the culprit before the grand ball tonight!

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 the Masked Royal is _____

Possible suspects

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

NAME	MAGIC CLASS	ROYAL COMPANION	WRITING HAND	HAIR STYLE	SECRET ALLERGY
Merida	beast speech	chameleon pet	uses left hand	golden braids	smell of perfume
Giselle	ocean control	chameleon pet	uses right hand	ebony waves	sound of bells
Anna	ocean control	loyal reindeer	uses left hand	auburn curls	bright sunlight
Jasmine	beast speech	clockwork friend	uses right hand	golden braids	sound of bells
Cinderella	forest charm	poisoned apple	uses right hand	ebony waves	sound of bells
Pocahontas	forest charm	chameleon pet	uses left hand	golden braids	bright sunlight
Rapunzel	ocean control	magic carpet	uses left hand	ebony waves	sound of bells
Mulan	frost magic	chameleon pet	uses right hand	golden braids	smell of perfume
Elena	beast speech	chameleon pet	uses right hand	ebony waves	smell of perfume
Wendy	frost magic	loyal reindeer	uses right hand	auburn curls	sound of bells
Charlotte	ocean control	loyal reindeer	uses right hand	ebony waves	sound of bells
Megara	forest charm	chameleon pet	uses left hand	auburn curls	smell of perfume
Alice	lantern light	poisoned apple	uses right hand	golden braids	smell of perfume
Sofia	ocean control	magic carpet	uses left hand	ebony waves	bright sunlight
Moana	lantern light	chameleon pet	uses right hand	ebony waves	bright sunlight
Aurora	forest charm	loyal reindeer	uses right hand	golden braids	bright sunlight
Elsa	frost magic	magic carpet	uses right hand	ebony waves	smell of perfume
Ariel	frost magic	chameleon pet	uses right hand	auburn curls	sound of bells
Tiana	ocean control	clockwork friend	uses right hand	ebony waves	sound of bells
Esmeralda	beast speech	poisoned apple	uses left hand	ebony waves	smell of perfume
Jane	forest charm	magic carpet	uses right hand	ebony waves	sound of bells

CLUE 1 Rounding

The castle guard spotted a strange cloud on the magical radar screen. The radar only displays rounded numbers, so we must round the distance to find where the suspect flew.

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

T																T	
8000	40	7000	2000	80	4000	4000	600	80	800	200	900	7000	500	800	900	8000	
40	600	2000	7000	600	50	900	80	500	900	800	7000	200	600	50	50	4000	7000

Round 7,930 to the nearest thousand → **T**

Round 41 to the nearest ten → **H**

Round 7,210 to the nearest thousand → **E**

Round 555 to the nearest hundred → **A**

Round 2,239 to the nearest thousand → **V**

Round 160 to the nearest hundred → **D**

Round 492 to the nearest hundred → **S**

Round 84 to the nearest ten → **I**

Round 4,481 to the nearest thousand → **L**

Round 841 to the nearest hundred → **N**

Round 856 to the nearest hundred → **O**

Round 54 to the nearest ten → **P**

Scratch space:

CLUE 2 Addition

A friendly palace mouse found a stash of stolen ribbon rolls in the pantry. We need to add the different colors together to see how many ribbons were taken.

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

T			T									T				
222	435	346	222	435	968	346	681	773	685	346	760	222	435	346	968	465
				T												
465	968	549	435	222	435	627	491	760	681	294	465	428	627	549	968	924

$$97 + 125 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$259 + 169 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$222 + 459 = \boxed{} \rightarrow \boxed{\text{F}}$$

$$294 + 171 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$376 + 251 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$218 + 467 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$483 + 441 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$628 + 340 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$330 + 219 = \boxed{} \rightarrow \boxed{\text{G}}$$

$$272 + 163 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$343 + 148 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$242 + 518 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$106 + 240 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$165 + 129 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$527 + 246 = \boxed{} \rightarrow \boxed{\text{U}}$$

Scratch space:

Subtraction

The royal baker noticed some jam tarts were missing from the kitchen. We must subtract the remaining tarts from the starting batch to find the clues left on the tray.

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

Number Memory cards (Top):

T																
811	526	429	280	472	429	274	872	897	274	472	274	340	274	172	274	811

Number Memory cards (Bottom):

T																
811	526	429	280	631	318	472	889	631	223	241	429	810	810	280		

$$937 - 126 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$525 - 353 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$513 - 290 = \boxed{} \rightarrow \boxed{\text{F}}$

$1049 - 160 = \boxed{} \rightarrow \boxed{\mathbf{D}}$

$453 - 24 = \boxed{} \rightarrow \boxed{\text{E}}$

$842 - 211 = \boxed{} \rightarrow \boxed{\text{O}}$

$817 - 345 = \boxed{} \rightarrow \boxed{\text{N}}$

$1293 - 396 = \boxed{} \rightarrow \boxed{\text{R}}$

$$418 - 100 = \boxed{} \rightarrow \boxed{\text{U}}$$

$1092 - 282 = \boxed{} \rightarrow \boxed{\text{L}}$

$1066 - 194 = \boxed{} \rightarrow \boxed{\text{K}}$

$$638 - 358 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$682 - 156 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$512 - 172 = \boxed{} \rightarrow \boxed{\text{W}}$$

$348 - 107 = \boxed{} \rightarrow \boxed{\text{B}}$

$543 - 269 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

We found rows of sparkling footprints leading out to the rose garden. By multiplying the rows of prints, we can calculate how far the suspect jumped.

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

W															
96	4	44	54	28	66	49	45	48	40	3	66	49	45	54	44

					W				
4	70	54	66	110	96	3	9	4	45

$8 \times 12 = \square \rightarrow \boxed{W}$

$3 \times 1 = \square \rightarrow \boxed{A}$

$4 \times 10 = \square \rightarrow \boxed{R}$

$4 \times 12 = \square \rightarrow \boxed{T}$

$4 \times 1 = \square \rightarrow \boxed{E}$

$7 \times 10 = \square \rightarrow \boxed{B}$

$4 \times 7 = \square \rightarrow \boxed{U}$

$10 \times 11 = \square \rightarrow \boxed{Y}$

$11 \times 4 = \square \rightarrow \boxed{F}$

$6 \times 11 = \square \rightarrow \boxed{N}$

$7 \times 7 = \square \rightarrow \boxed{D}$

$1 \times 9 = \square \rightarrow \boxed{V}$

$5 \times 9 = \square \rightarrow \boxed{S}$

$6 \times 9 = \square \rightarrow \boxed{O}$

Scratch space:

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

The head guard needs to divide the royal potion bottles equally among the search teams. Dividing the bottles will help us unlock the final magic chest.

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:

$2 \div 1 = \boxed{}$

$7 \div 1 = \boxed{}$

$6 \div 6 = \boxed{}$

$20 \div 2 = \boxed{}$

$108 \div 12 = \boxed{}$

$24 \div 2 = \boxed{}$

$77 \div 7 = \boxed{}$

$25 \div 5 = \boxed{}$

$16 \div 4 = \boxed{}$

$54 \div 9 = \boxed{}$

$16 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain raised a wave from the moat, then rode off on a swift loyal reindeer.
2. The villain raised a wave from the moat, then wound up a ticking clockwork friend.
3. The villain called the forest creatures for help, then escaped on a flying magic carpet.
4. The villain called the forest creatures for help, then left behind a shiny poisoned apple.
5. The villain lit the dark hallway with a floating lantern, then rode off on a swift loyal reindeer.
6. The villain ordered the royal birds to fly, then escaped on a flying magic carpet.
7. The villain raised a wave from the moat, then hid their tracks with a chameleon pet.
8. The villain lit the dark hallway with a floating lantern, then left behind a shiny poisoned apple.
9. The villain called the forest creatures for help, then rode off on a swift loyal reindeer.
10. The villain lit the dark hallway with a floating lantern, then wound up a ticking clockwork friend.
11. The villain called the forest creatures for help, then wound up a ticking clockwork friend.
12. The villain called the forest creatures for help, then hid their tracks with a chameleon pet.

Answer Key

The Case of the Missing Tiara

Culprit: Jane

forest charm · magic carpet · uses right hand · ebony waves · sound of bells

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT HAVE A POISONED APPLE"

Round 7,930 to the nearest thousand = 8000 (T) · Round 41 to the nearest ten = 40 (H) · Round 7,210 to the nearest thousand = 7000 (E) · Round 555 to the nearest hundred = 600 (A) · Round 2,239 to the nearest thousand = 2000 (V) · Round 160 to the nearest hundred = 200 (D) · Round 492 to the nearest hundred = 500 (S) · Round 84 to the nearest ten = 80 (I) · Round 4,481 to the nearest thousand = 4000 (L) · Round 841 to the nearest hundred = 800 (N) · Round 856 to the nearest hundred = 900 (O) · Round 54 to the nearest ten = 50 (P)

Clue 2 (Addition): "THE THIEF USED THEIR RIGHT HAND FOR MAGIC"

$97 + 125 = 222$ (T) · $259 + 169 = 428$ (M) · $222 + 459 = 681$ (F) · $294 + 171 = 465$ (R) · $376 + 251 = 627$ (A) · $218 + 467 = 685$ (S) · $483 + 441 = 924$ (C) · $628 + 340 = 968$ (I) · $330 + 219 = 549$ (G) · $272 + 163 = 435$ (H) · $343 + 148 = 491$ (N) · $242 + 518 = 760$ (D) · $106 + 240 = 346$ (E) · $165 + 129 = 294$ (O) · $527 + 246 = 773$ (U)

Clue 3 (Subtraction): "THE SNEAK RAN AWAY AT THE SOUND OF BELLS"

$937 - 126 = 811$ (T) · $525 - 353 = 172$ (Y) · $513 - 290 = 223$ (F) · $1049 - 160 = 889$ (D) · $453 - 24 = 429$ (E) · $842 - 211 = 631$ (O) · $817 - 345 = 472$ (N) · $1293 - 396 = 897$ (R) · $418 - 100 = 318$ (U) · $1092 - 282 = 810$ (L) · $1066 - 194 = 872$ (K) · $638 - 358 = 280$ (S) · $682 - 156 = 526$ (H) · $512 - 172 = 340$ (W) · $348 - 107 = 241$ (B) · $543 - 269 = 274$ (A)

Clue 4 (Multiplication facts (1-12)): "WE FOUND STRANDS OF EBONY WAVES"

$8 \times 12 = 96$ (W) · $3 \times 1 = 3$ (A) · $4 \times 10 = 40$ (R) · $4 \times 12 = 48$ (T) · $4 \times 1 = 4$ (E) · $7 \times 10 = 70$ (B) · $4 \times 7 = 28$ (U) · $10 \times 11 = 110$ (Y) · $11 \times 4 = 44$ (F) · $6 \times 11 = 66$ (N) · $7 \times 7 = 49$ (D) · $1 \times 9 = 9$ (V) · $5 \times 9 = 45$ (S) · $6 \times 9 = 54$ (O)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Jane

$2 \div 1 = 2$ · $7 \div 1 = 7$ · $6 \div 6 = 1$ · $20 \div 2 = 10$ · $108 \div 12 = 9$ · $24 \div 2 = 12$ · $77 \div 7 = 11$ · $25 \div 5 = 5$ · $16 \div 4 = 4$ · $54 \div 9 = 6$ · $16 \div 2 = 8$