The Case of the Missing Royal Tiara

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

Detective: _____ **Date:** _____

Someone snuck into Sunspire Castle during the Royal Gala and swapped the sacred Tiara of Sunspire with a cheap glass fake! The Grand Chamberlain needs your detective skills to figure out which guest is the imposter before the midnight dance begins.

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 palace imposter is _____

Possible suspects

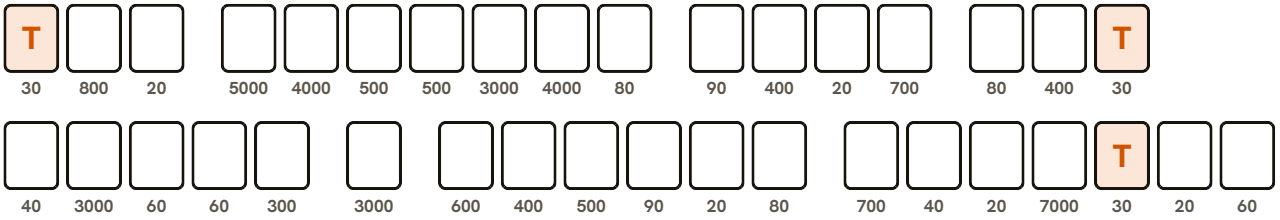
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	ROYAL TALENT	PALACE CHARM	GLOVE STYLE	TIARA GEM	TRICKY WEAKNESS
Princess Rapunzel	Pastry Baking	Golden Scepter	Right Handed Wave	Ruby Hair Clip	Loud Dragon Roars
Princess Hazel	Falcon Calling	Velvet Fan	Left Handed Wave	Sapphire Hair Clip	Loud Dragon Roars
Princess Iris	Pastry Baking	Rose Scented Cloak	Right Handed Wave	Sapphire Hair Clip	Sneezing Powder
Princess Cleo	Ribbon Twirling	Rose Scented Cloak	Left Handed Wave	Emerald Hair Clip	Spilled Tea
Princess Tiana	Falcon Calling	Rose Scented Cloak	Left Handed Wave	Sapphire Hair Clip	Sneezing Powder
Princess Aurora	Glass Slipper Dancing	Golden Scepter	Right Handed Wave	Emerald Hair Clip	Spilled Tea
Princess Jasmine	Glass Slipper Dancing	Silver Bell Ring	Right Handed Wave	Ruby Hair Clip	Loud Dragon Roars
Princess Ariel	Ribbon Twirling	Silver Bell Ring	Right Handed Wave	Ruby Hair Clip	Sneezing Powder
Princess Pippa	Harp Strumming	Rose Scented Cloak	Right Handed Wave	Emerald Hair Clip	Sneezing Powder
Princess Merida	Ribbon Twirling	Diamond Wand	Left Handed Wave	Emerald Hair Clip	Loud Dragon Roars
Princess Elsa	Falcon Calling	Silver Bell Ring	Right Handed Wave	Ruby Hair Clip	Loud Dragon Roars
Princess Ella	Glass Slipper Dancing	Diamond Wand	Right Handed Wave	Emerald Hair Clip	Sneezing Powder
Princess Belle	Glass Slipper Dancing	Golden Scepter	Left Handed Wave	Emerald Hair Clip	Sneezing Powder
Princess Snow	Falcon Calling	Rose Scented Cloak	Right Handed Wave	Emerald Hair Clip	Spilled Tea
Princess Anna	Pastry Baking	Velvet Fan	Left Handed Wave	Emerald Hair Clip	Loud Dragon Roars
Princess Violet	Glass Slipper Dancing	Rose Scented Cloak	Left Handed Wave	Ruby Hair Clip	Spilled Tea
Princess Ivy	Ribbon Twirling	Diamond Wand	Left Handed Wave	Emerald Hair Clip	Sneezing Powder
Princess Rose	Harp Strumming	Rose Scented Cloak	Left Handed Wave	Emerald Hair Clip	Sneezing Powder
Princess Daisy	Glass Slipper Dancing	Silver Bell Ring	Left Handed Wave	Emerald Hair Clip	Sneezing Powder
Princess Mulan	Glass Slipper Dancing	Velvet Fan	Left Handed Wave	Emerald Hair Clip	Sneezing Powder
Princess Flora	Falcon Calling	Golden Scepter	Right Handed Wave	Emerald Hair Clip	Loud Dragon Roars

CLUE 1 Rounding

The royal guard checking guest badges only saw rounded numbers on the magic entry scanner.

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



Round 33 to the nearest ten ☐ → T

Round 278 to the nearest hundred ☐ → Y

Round 78 to the nearest ten ☐ → N

Round 614 to the nearest hundred ☐ → G

Round 836 to the nearest hundred ☐ → H

Round 7,000 to the nearest thousand ☐ → P

Round 4,641 to the nearest thousand ☐ → V

Round 93 to the nearest ten ☐ → D

Round 3,948 to the nearest thousand ☐ → I

Round 695 to the nearest hundred ☐ → S

Round 41 to the nearest ten ☐ → C

Round 453 to the nearest hundred ☐ → L

Round 372 to the nearest hundred ☐ → O

Round 19 to the nearest ten ☐ → E

Round 57 to the nearest ten ☐ → R

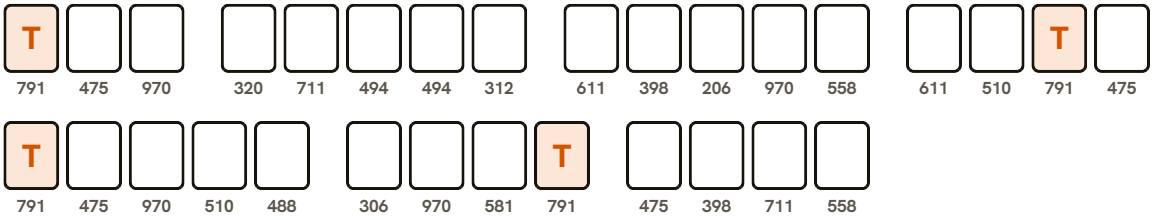
Round 2,604 to the nearest thousand ☐ → A

Scratch space:

CLUE 2 Addition

The head butler added up all the sparkly invitation cards dropped near the throne room.

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



238 + 553 = ☐ → T

85 + 121 = ☐ → V

229 + 281 = ☐ → I

426 + 285 = ☐ → N

183 + 375 = ☐ → D

148 + 164 = ☐ → P

237 + 257 = ☐ → O

133 + 173 = ☐ → L

185 + 396 = ☐ → F

165 + 155 = ☐ → S

562 + 408 = ☐ → E

276 + 122 = ☐ → A

180 + 295 = ☐ → H

236 + 252 = ☐ → R

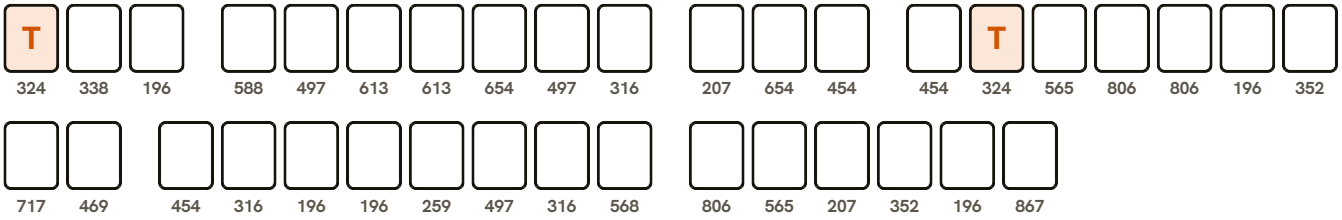
414 + 197 = ☐ → W

Scratch space:

CLUE 3 Subtraction

The palace detective subtracted the missing silk handkerchiefs left in the garden.

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



470 - 146 = ☐ → T

880 - 74 = ☐ → P

832 - 219 = ☐ → L

1034 - 317 = ☐ → B

229 - 22 = ☐ → W

773 - 304 = ☐ → Y

562 - 246 = ☐ → N

903 - 338 = ☐ → O

352 - 93 = ☐ → Z

938 - 370 = ☐ → G

690 - 193 = ☐ → I

582 - 386 = ☐ → E

481 - 143 = ☐ → H

692 - 340 = ☐ → D

987 - 120 = ☐ → R

918 - 330 = ☐ → V

821 - 367 = ☐ → S

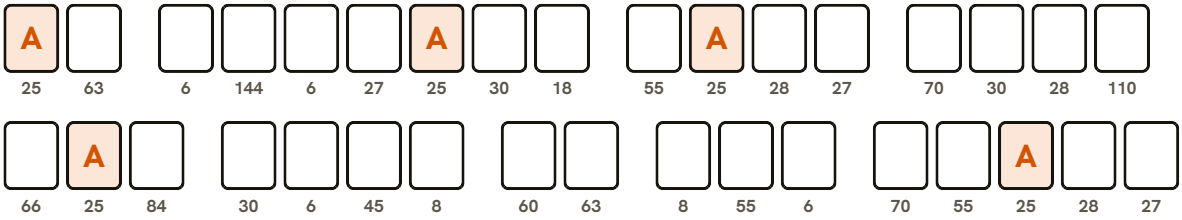
846 - 192 = ☐ → A

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The pastry chef counted equal rows of frosted cupcakes set out on long banquet tables.

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



5 × 5 = ☐ → A

12 × 5 = ☐ → O

9 × 3 = ☐ → R

12 × 12 = ☐ → M

7 × 4 = ☐ → I

2 × 4 = ☐ → T

3 × 2 = ☐ → E

11 × 10 = ☐ → P

5 × 11 = ☐ → H

10 × 3 = ☐ → L

3 × 6 = ☐ → D

9 × 5 = ☐ → F

7 × 10 = ☐ → C

11 × 6 = ☐ → W

9 × 7 = ☐ → N

7 × 12 = ☐ → S

Scratch space:

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

> The castle pages split glowing clues into equal groups across the courtyard.

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:

108 ÷ 12 = ☐ | 42 ÷ 6 = ☐ | 18 ÷ 9 = ☐ | 66 ÷ 11 = ☐ | 32 ÷ 8 = ☐

1 ÷ 1 = ☐ | 16 ÷ 2 = ☐ | 132 ÷ 11 = ☐ | 15 ÷ 5 = ☐ | 110 ÷ 11 = ☐

99 ÷ 9 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain called down a flock of royal falcons, then wrapped tightly in a rose scented cloak.
2. The villain played a distracting tune on the harp, then wrapped tightly in a rose scented cloak.
3. The villain threw warm berry pastries everywhere, then tapped the floor with a diamond wand.
4. The villain twirled long silk ribbons in the air, then marched off holding a golden scepter.
5. The villain danced across the slick ballroom floor, then rang a quiet silver bell as a signal.
6. The villain played a distracting tune on the harp, then marched off holding a golden scepter.
7. The villain danced across the slick ballroom floor, then hid behind a decorative velvet fan.
8. The villain threw warm berry pastries everywhere, then rang a quiet silver bell as a signal.
9. The villain twirled long silk ribbons in the air, then tapped the floor with a diamond wand.
10. The villain danced across the slick ballroom floor, then wrapped tightly in a rose scented cloak.
11. The villain danced across the slick ballroom floor, then tapped the floor with a diamond wand.
12. The villain played a distracting tune on the harp, then tapped the floor with a diamond wand.

TEACHER / PARENT

Answer Key

The Case of the Missing Royal Tiara

Culprit: Princess Daisy

Glass Slipper Dancing · Silver Bell Ring · Left Handed Wave · Emerald Hair Clip · Sneezing Powder

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT CARRY A GOLDEN SCEPTER"

Round 33 to the nearest ten = 30 (T) · Round 278 to the nearest hundred = 300 (Y) · Round 78 to the nearest ten = 80 (N) · Round 614 to the nearest hundred = 600 (G) · Round 836 to the nearest hundred = 800 (H) · Round 7,000 to the nearest thousand = 7000 (P) · Round 4,641 to the nearest thousand = 5000 (V) · Round 93 to the nearest ten = 90 (D) · Round 3,948 to the nearest thousand = 4000 (I) · Round 695 to the nearest hundred = 700 (S) · Round 41 to the nearest ten = 40 (C) · Round 453 to the nearest hundred = 500 (L) · Round 372 to the nearest hundred = 400 (O) · Round 19 to the nearest ten = 20 (E) · Round 57 to the nearest ten = 60 (R) · Round 2,604 to the nearest thousand = 3000 (A)

Clue 2 (Addition): "THE SNOOP WAVED WITH THEIR LEFT HAND"

238 + 553 = 791 (T) · 85 + 121 = 206 (V) · 229 + 281 = 510 (I) · 426 + 285 = 711 (N) · 183 + 375 = 558 (D) · 148 + 164 = 312 (P) · 237 + 257 = 494 (O) · 133 + 173 = 306 (L) · 185 + 396 = 581 (F) · 165 + 155 = 320 (S) · 562 + 408 = 970 (E) · 276 + 122 = 398 (A) · 180 + 295 = 475 (H) · 236 + 252 = 488 (R) · 414 + 197 = 611 (W)

Clue 3 (Subtraction): "THE VILLAIN WAS STOPPED BY SNEEZING POWDER"

470 - 146 = 324 (T) · 880 - 74 = 806 (P) · 832 - 219 = 613 (L) · 1034 - 317 = 717 (B) · 229 - 22 = 207 (W) · 773 - 304 = 469 (Y) · 562 - 246 = 316 (N) · 903 - 338 = 565 (O) · 352 - 93 = 259 (Z) · 938 - 370 = 568 (G) · 690 - 193 = 497 (I) · 582 - 386 = 196 (E) · 481 - 143 = 338 (H) · 692 - 340 = 352 (D) · 987 - 120 = 867 (R) · 918 - 330 = 588 (V) · 821 - 367 = 454 (S) · 846 - 192 = 654 (A)

Clue 4 (Multiplication facts (1-12)): "AN EMERALD HAIR CLIP WAS LEFT ON THE CHAIR"

5 × 5 = 25 (A) · 12 × 5 = 60 (O) · 9 × 3 = 27 (R) · 12 × 12 = 144 (M) · 7 × 4 = 28 (I) · 2 × 4 = 8 (T) · 3 × 2 = 6 (E) · 11 × 10 = 110 (P) · 5 × 11 = 55 (H) · 10 × 3 = 30 (L) · 3 × 6 = 18 (D) · 9 × 5 = 45 (F) · 7 × 10 = 70 (C) · 11 × 6 = 66 (W) · 9 × 7 = 63 (N) · 7 × 12 = 84 (S)

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

108 ÷ 12 = 9 · 42 ÷ 6 = 7 · 18 ÷ 9 = 2 · 66 ÷ 11 = 6 · 32 ÷ 8 = 4 · 1 ÷ 1 = 1 · 16 ÷ 2 = 8 · 132 ÷ 11 = 12 · 15 ÷ 5 = 3 · 110 ÷ 11 = 10 · 99 ÷ 9 = 11