The Mystery of the Golden Laurel

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

Detective: _____ **Date:** _____

Someone snuck into the Sacred Grove at Mount Olympus Academy and grabbed the enchanted Golden Laurel! The Guardian needs your help to examine the clues, solve the math mysteries, and find out who took it.

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 Mythic Mischief-Maker is _____

Possible suspects

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

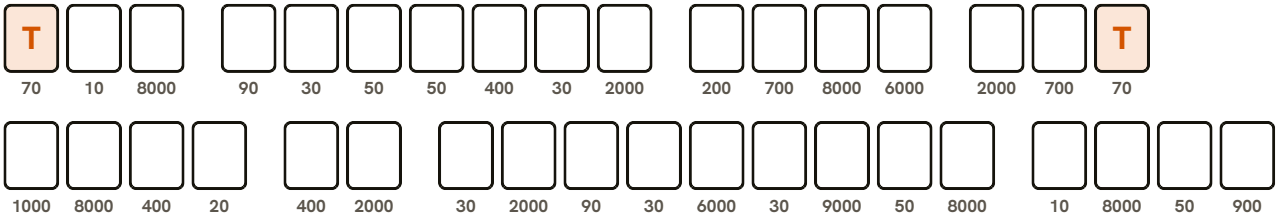
NAME	ELEMENTAL GIFT	SACRED GEAR	RING HAND	HAIR STYLE	SECRET WEAKNESS
Silas	Solar Flare	Golden Shield	Wears Ring on Right Hand	Braided Gold Hair	Mirror Reflect
Jason	Solar Flare	Magic Lasso	Wears Ring on Left Hand	Braided Gold Hair	Loud Music
Maia	Earth Shake	Winged Sandals	Wears Ring on Left Hand	Braided Gold Hair	Mirror Reflect
Damon	Solar Flare	Golden Shield	Wears Ring on Left Hand	Silver Spun Hair	Sweet Honey
Linus	Solar Flare	Bronze Armor	Wears Ring on Left Hand	Silver Spun Hair	Loud Music
Daphne	Earth Shake	Winged Sandals	Wears Ring on Left Hand	Braided Gold Hair	Sweet Honey
Evander	Lightning Strike	Magic Lasso	Wears Ring on Left Hand	Silver Spun Hair	Mirror Reflect
Kael	Wind Blast	Golden Shield	Wears Ring on Left Hand	Braided Gold Hair	Loud Music
Helen	Wind Blast	Magic Lasso	Wears Ring on Left Hand	Silver Spun Hair	Mirror Reflect
Chloe	Tidal Wave	Invisible Helm	Wears Ring on Right Hand	Dark Curly Hair	Loud Music
Lyra	Solar Flare	Invisible Helm	Wears Ring on Left Hand	Braided Gold Hair	Loud Music
Cassandra	Solar Flare	Golden Shield	Wears Ring on Left Hand	Braided Gold Hair	Mirror Reflect
Astra	Solar Flare	Invisible Helm	Wears Ring on Left Hand	Silver Spun Hair	Mirror Reflect
Theron	Solar Flare	Winged Sandals	Wears Ring on Left Hand	Dark Curly Hair	Sweet Honey
Orion	Lightning Strike	Winged Sandals	Wears Ring on Left Hand	Dark Curly Hair	Loud Music
Phoebe	Lightning Strike	Magic Lasso	Wears Ring on Right Hand	Braided Gold Hair	Loud Music
Perseus	Wind Blast	Golden Shield	Wears Ring on Left Hand	Silver Spun Hair	Mirror Reflect
Rhea	Earth Shake	Magic Lasso	Wears Ring on Right Hand	Silver Spun Hair	Mirror Reflect
Castor	Lightning Strike	Winged Sandals	Wears Ring on Left Hand	Silver Spun Hair	Mirror Reflect
Iris	Wind Blast	Invisible Helm	Wears Ring on Left Hand	Braided Gold Hair	Mirror Reflect
Zenon	Earth Shake	Bronze Armor	Wears Ring on Left Hand	Silver Spun Hair	Loud Music

make your own at mathcrackers.com

CLUE 1 Place value

You inspect the marble gate code carved into the ancient pillar to reveal the tens digit.

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



What is the value of the 7 in 6,071? ☐ → T

What is the value of the 6 in 6,409? ☐ → S

What is the value of the 4 in 489? ☐ → A

What is the value of the 9 in 7,393? ☐ → V

What is the value of the 3 in 8,835? ☐ → I

What is the value of the 1 in 1,577? ☐ → W

What is the value of the 9 in 943? ☐ → M

What is the value of the 8 in 8,122? ☐ → E

What is the value of the 5 in 952? ☐ → L

What is the value of the 7 in 6,723? ☐ → O

What is the value of the 2 in 8,230? ☐ → D

What is the value of the 1 in 5,313? ☐ → H

What is the value of the 2 in 7,020? ☐ → R

What is the value of the 9 in 89,655? ☐ → B

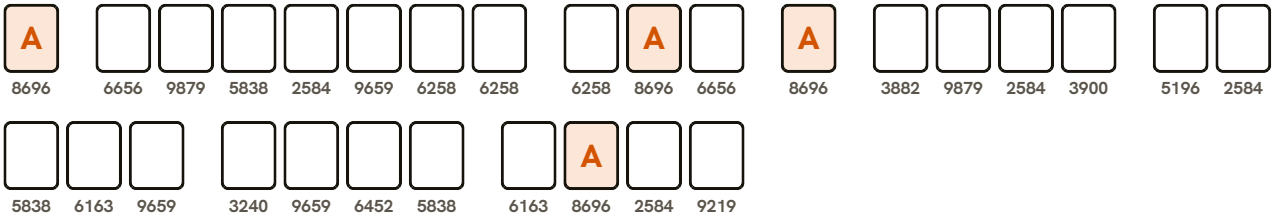
What is the value of the 2 in 2,718? ☐ → N

Scratch space:

CLUE 2 Addition

You add up the dropped olive wreaths found outside the temple steps.

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



2668 + 6028 = ☐ → A	2961 + 3695 = ☐ → W	4249 + 5410 = ☐ → E
2872 + 6347 = ☐ → D	3641 + 2617 = ☐ → S	1796 + 2104 = ☐ → G
3860 + 6019 = ☐ → I	3822 + 2630 = ☐ → F	1432 + 1808 = ☐ → L
1191 + 2691 = ☐ → R	2367 + 3796 = ☐ → H	1023 + 1561 = ☐ → N
3104 + 2734 = ☐ → T	1754 + 3442 = ☐ → O	

Scratch space:

CLUE 3 Subtraction

You count how many golden coins remain after the intruder dropped a handful.

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



4229 - 2860 = ☐ → A

12024 - 4677 = ☐ → R

9178 - 298 = ☐ → O

3471 - 1665 = ☐ → D

9302 - 2887 = ☐ → F

3637 - 718 = ☐ → L

3328 - 375 = ☐ → I

8001 - 393 = ☐ → P

5014 - 3094 = ☐ → M

10080 - 1867 = ☐ → T

8991 - 559 = ☐ → H

3830 - 529 = ☐ → C

5744 - 1129 = ☐ → S

5070 - 232 = ☐ → U

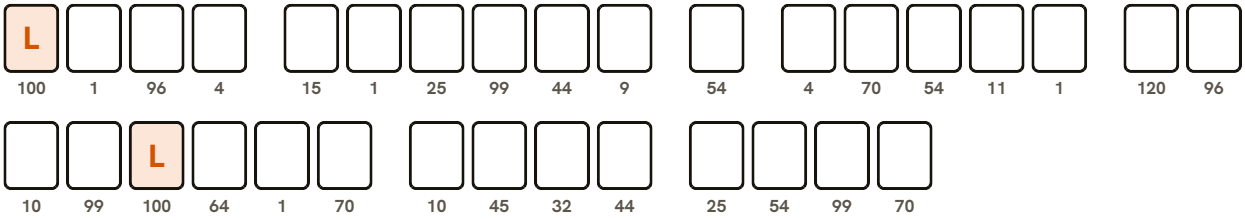
11458 - 3249 = ☐ → E

Scratch space:

CLUE 4 Multiplication facts (1-12)

> You count five rows of pottery jars lined up inside the sanctuary.

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



10 × 10 = ☐ → L	1 × 1 = ☐ → E	4 × 8 = ☐ → U		
3 × 3 = ☐ → D	5 × 3 = ☐ → B	7 × 10 = ☐ → R	6 × 9 = ☐ → A	
11 × 4 = ☐ → N	8 × 8 = ☐ → V	5 × 2 = ☐ → S		
12 × 10 = ☐ → O	11 × 1 = ☐ → C	12 × 8 = ☐ → F		
11 × 9 = ☐ → I	9 × 5 = ☐ → P	1 × 4 = ☐ → T	5 × 5 = ☐ → H	

Scratch space:

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

> You divide the total ambrosia loaves equally among the guard posts.

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:

12 ÷ 6 = ☐	50 ÷ 10 = ☐	20 ÷ 5 = ☐	8 ÷ 8 = ☐	6 ÷ 1 = ☐
56 ÷ 8 = ☐	3 ÷ 1 = ☐	88 ÷ 8 = ☐	90 ÷ 9 = ☐	84 ÷ 7 = ☐
63 ÷ 7 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain whipped up a wind blast, then snuck past with an invisible helm.
2. The villain summoned a lightning strike, then snared guards using a magic lasso.
3. The villain created a tidal wave, then sped away using winged sandals.
4. The villain whipped up a wind blast, then deflected blows with a golden shield.
5. The villain whipped up a wind blast, then snared guards using a magic lasso.
6. The villain blazed with a solar flare, then sped away using winged sandals.
7. The villain summoned a lightning strike, then blocked hits with bronze armor.
8. The villain summoned a lightning strike, then sped away using winged sandals.
9. The villain summoned a lightning strike, then snuck past with an invisible helm.
10. The villain blazed with a solar flare, then snared guards using a magic lasso.
11. The villain whipped up a wind blast, then blocked hits with bronze armor.
12. The villain blazed with a solar flare, then deflected blows with a golden shield.

TEACHER / PARENT

Answer Key

The Mystery of the Golden Laurel

Culprit: Castor

Lightning Strike · Winged Sandals · Wears Ring on Left Hand · Silver Spun Hair · Mirror Reflect

Trail: Start 21 → Clue 1 17 → Clue 2 14 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT WEAR AN INVISIBLE HELM"

What is the value of the 7 in 6,071? = 70 (T) · What is the value of the 6 in 6,409? = 6000 (S) · What is the value of the 4 in 489? = 400 (A) · What is the value of the 9 in 7,393? = 90 (V) · What is the value of the 3 in 8,835? = 30 (I) · What is the value of the 1 in 1,577? = 1000 (W) · What is the value of the 9 in 943? = 900 (M) · What is the value of the 8 in 8,122? = 8000 (E) · What is the value of the 5 in 952? = 50 (L) · What is the value of the 7 in 6,723? = 700 (O) · What is the value of the 2 in 8,230? = 200 (D) · What is the value of the 1 in 5,313? = 10 (H) · What is the value of the 2 in 7,020? = 20 (R) · What is the value of the 9 in 89,655? = 9000 (B) · What is the value of the 2 in 2,718? = 2000 (N)

Clue 2 (Addition): "A WITNESS SAW A RING ON THE LEFT HAND"

2668 + 6028 = 8696 (A) · 2961 + 3695 = 6656 (W) · 4249 + 5410 = 9659 (E) · 2872 + 6347 = 9219 (D) · 3641 + 2617 = 6258 (S) · 1796 + 2104 = 3900 (G) · 3860 + 6019 = 9879 (I) · 3822 + 2630 = 6452 (F) · 1432 + 1808 = 3240 (L) · 1191 + 2691 = 3882 (R) · 2367 + 3796 = 6163 (H) · 1023 + 1561 = 2584 (N) · 3104 + 2734 = 5838 (T) · 1754 + 3442 = 5196 (O)

Clue 3 (Subtraction): "A MIRROR REFLECT SCARED THE CULPRIT"

4229 - 2860 = 1369 (A) · 12024 - 4677 = 7347 (R) · 9178 - 298 = 8880 (O) · 3471 - 1665 = 1806 (D) · 9302 - 2887 = 6415 (F) · 3637 - 718 = 2919 (L) · 3328 - 375 = 2953 (I) · 8001 - 393 = 7608 (P) · 5014 - 3094 = 1920 (M) · 10080 - 1867 = 8213 (T) · 8991 - 559 = 8432 (H) · 3830 - 529 = 3301 (C) · 5744 - 1129 = 4615 (S) · 5070 - 232 = 4838 (U) · 11458 - 3249 = 8209 (E)

Clue 4 (Multiplication facts (1-12)): "LEFT BEHIND A TRACE OF SILVER SPUN HAIR"

10 × 10 = 100 (L) · 1 × 1 = 1 (E) · 4 × 8 = 32 (U) · 3 × 3 = 9 (D) · 5 × 3 = 15 (B) · 7 × 10 = 70 (R) · 6 × 9 = 54 (A) · 11 × 4 = 44 (N) · 8 × 8 = 64 (V) · 5 × 2 = 10 (S) · 12 × 10 = 120 (O) · 11 × 1 = 11 (C) · 12 × 8 = 96 (F) · 11 × 9 = 99 (I) · 9 × 5 = 45 (P) · 1 × 4 = 4 (T) · 5 × 5 = 25 (H)

Clue 5 (Division facts (1-12)): surviving statement is box 8 → Castor

12 ÷ 6 = 2 · 50 ÷ 10 = 5 · 20 ÷ 5 = 4 · 8 ÷ 8 = 1 · 6 ÷ 1 = 6 · 56 ÷ 8 = 7 · 3 ÷ 1 = 3 · 88 ÷ 8 = 11 · 90 ÷ 9 = 10 · 84 ÷ 7 = 12 · 63 ÷ 7 = 9