



The Case of the Missing Rainbow Prism

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

Detective: _____ Date: _____

Someone has stolen the Rainbow Prism from the Keeper of the Prism in the Sparklewood Canopy! The beautiful trees are turning a dull grey. We must find the sneaky Gloom Mare before all the color fades away forever.

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 Gloom Mare is _____

Possible suspects

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

NAME	MAIN MAGIC	EXTRA GEAR	NERVOUS TELL	MANE COLOR	WEAKNESS
Sprinkles	Rainbow Dash	Jewel Saddle	Right Ear Twitch	Blue Mane	Bright Lights
Sunburst	Horn Beam	Golden Shoes	Right Ear Twitch	Blue Mane	Bright Lights
Sapphire	Rainbow Dash	Golden Shoes	Left Ear Twitch	Pink Mane	Bright Lights
Amethyst	Cloud Bounce	Pearl Bridle	Right Ear Twitch	Blue Mane	Loud Bells
Bella	Rainbow Dash	Golden Shoes	Right Ear Twitch	Purple Mane	Bright Lights
Buttercup	Rainbow Dash	Pearl Bridle	Right Ear Twitch	Pink Mane	Sweet Apples
Blossom	Horn Beam	Jewel Saddle	Left Ear Twitch	Blue Mane	Sweet Apples
Breezy	Horn Beam	Silver Bell	Left Ear Twitch	Pink Mane	Loud Bells
Prism	Cloud Bounce	Silver Bell	Right Ear Twitch	Purple Mane	Loud Bells
Celestia	Horn Beam	Silver Bell	Right Ear Twitch	Pink Mane	Bright Lights
Twinkle	Glitter Blast	Golden Shoes	Left Ear Twitch	Blue Mane	Bright Lights
Skye	Cloud Bounce	Silver Bell	Left Ear Twitch	Blue Mane	Sweet Apples
Sparks	Star Shield	Pearl Bridle	Left Ear Twitch	Blue Mane	Bright Lights
Waffles	Glitter Blast	Silver Bell	Left Ear Twitch	Purple Mane	Sweet Apples
Nova	Glitter Blast	Jewel Saddle	Right Ear Twitch	Blue Mane	Sweet Apples
Starbuck	Cloud Bounce	Jewel Saddle	Right Ear Twitch	Purple Mane	Bright Lights
Daisy	Star Shield	Jewel Saddle	Right Ear Twitch	Blue Mane	Bright Lights
Barnaby	Horn Beam	Crystal Crown	Right Ear Twitch	Blue Mane	Bright Lights
Pip	Star Shield	Jewel Saddle	Right Ear Twitch	Pink Mane	Sweet Apples
Sherbet	Star Shield	Golden Shoes	Right Ear Twitch	Purple Mane	Bright Lights
Glimmer	Star Shield	Golden Shoes	Right Ear Twitch	Blue Mane	Bright Lights

CLUE 1 Rounding

The magical radar screen only shows rounded numbers. Round the spark distance to the nearest ten to find where the suspect dropped their extra gear.

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

T																T
110	370	2900	230	2300	430	430	300	2300	5000	1100	4300	2900	290	5000	4300	110
1700	2900	300	1300	300	90	1300	7000	290	110	300	430	90	1300	4300	1700	5000

Round 114 to the nearest ten → **T**

Round 2,335 to the nearest hundred → **I**

Round 7,141 to the nearest thousand → **Y**

Round 288 to the nearest ten → **S**

Round 1,731 to the nearest hundred → **W**

Round 306 to the nearest hundred → **A**

Round 2,912 to the nearest hundred → **E**

Round 366 to the nearest ten → **H**

Round 4,257 to the nearest hundred → **O**

Round 228 to the nearest ten → **V**

Round 1,092 to the nearest hundred → **D**

Round 1,292 to the nearest hundred → **R**

Round 92 to the nearest ten → **C**

Round 4,556 to the nearest thousand → **N**

Round 429 to the nearest ten → **L**

Scratch space:

CLUE 2 Addition

We found piles of glowing magic gems dropped in the meadow. Add all the gems together to see how many clue details were left behind.

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

T									T						T			
3328	8357	8264	8919	8539	8919	8710	8264	2551	3328	8919	8792	6937	7730	8357	3328	8264	5938	8792

			T			T					
2023	5938	8919	3328	2023	6937	3328	2551	8357	6937	8425	7730

$1591 + 1737 = \square \rightarrow \text{T}$	$1698 + 853 = \square \rightarrow \text{C}$	$5274 + 3083 = \square \rightarrow \text{H}$
$2511 + 3427 = \square \rightarrow \text{A}$	$3919 + 3811 = \square \rightarrow \text{G}$	$4697 + 2240 = \square \rightarrow \text{I}$
$4109 + 4430 = \square \rightarrow \text{U}$	$3730 + 4534 = \square \rightarrow \text{E}$	$4459 + 4333 = \square \rightarrow \text{R}$
$4502 + 4208 = \square \rightarrow \text{P}$	$1075 + 948 = \square \rightarrow \text{W}$	$5332 + 3093 = \square \rightarrow \text{N}$
$3675 + 5244 = \square \rightarrow \text{S}$		

Scratch space:

CLUE 3

Subtraction

The pixie counted the sparkling horseshoes left in the royal stable. Subtract the stolen shoes from the starting total to get the next scoop.

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

T																	
7152	2484	5190	5304	7189	5493	5493	5211	7189	7053	4705	5211	7053	5211	7250	5211	2877	

2893	4705	5884	2791	4862	4705	7189	2733	2484	7152	5493	7189	2733	2484	7152	8107		

$8156 - 1004 = \square \rightarrow \boxed{\text{T}}$

$3038 - 247 = \square \rightarrow \boxed{\text{M}}$

$7115 - 62 = \square \rightarrow \boxed{\text{N}}$

$6458 - 1753 = \square \rightarrow \boxed{\text{R}}$

$6503 - 3610 = \square \rightarrow \boxed{\text{F}}$

$6110 - 1248 = \square \rightarrow \boxed{\text{B}}$

$8481 - 2597 = \square \rightarrow \boxed{\text{O}}$

$3125 - 392 = \square \rightarrow \boxed{\text{G}}$

$8597 - 3293 = \square \rightarrow \boxed{\text{V}}$

$8173 - 2962 = \square \rightarrow \boxed{\text{A}}$

$9253 - 4063 = \square \rightarrow \boxed{\text{E}}$

$6818 - 1325 = \square \rightarrow \boxed{\text{L}}$

$9525 - 2336 = \square \rightarrow \boxed{\text{I}}$

$3464 - 980 = \square \rightarrow \boxed{\text{H}}$

$6194 - 3317 = \square \rightarrow \boxed{\text{Y}}$

$8465 - 1215 = \square \rightarrow \boxed{\text{W}}$

$12624 - 4517 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

CLUE 4
Multiplication facts (1-12)

Rainbow trees grow in perfect rows in the orchard. Multiply the rows of trees to figure out the path the suspect took.

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

W																		
35	10	9	5	120	24	30	88	100	120	10	42	108	24	10	55	108	49	25
108	66	66	55	10	14	28	10	24	10									

$7 \times 5 = \square \rightarrow \text{W}$

$1 \times 10 = \square \rightarrow \text{E}$

$3 \times 10 = \square \rightarrow \text{D}$

$12 \times 2 = \square \rightarrow \text{N}$

$11 \times 5 = \square \rightarrow \text{H}$

$11 \times 6 = \square \rightarrow \text{T}$

$2 \times 7 = \square \rightarrow \text{S}$

$9 \times 1 = \square \rightarrow \text{F}$

$5 \times 5 = \square \rightarrow \text{R}$

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

$12 \times 10 = \square \rightarrow \text{U}$

$12 \times 9 = \square \rightarrow \text{A}$

$4 \times 7 = \square \rightarrow \text{C}$

$7 \times 7 = \square \rightarrow \text{I}$

$1 \times 5 = \square \rightarrow \text{O}$

$11 \times 8 = \square \rightarrow \text{B}$

$6 \times 7 = \square \rightarrow \text{M}$

Scratch space:

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

We must share the sparkling sugar cubes equally among the forest sprites. Divide the treats to get the final clue about the villain.

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:

$6 \div 2 = \boxed{}$

$24 \div 2 = \boxed{}$

$6 \div 1 = \boxed{}$

$10 \div 10 = \boxed{}$

$12 \div 6 = \boxed{}$

$36 \div 9 = \boxed{}$

$96 \div 12 = \boxed{}$

$55 \div 11 = \boxed{}$

$70 \div 10 = \boxed{}$

$99 \div 11 = \boxed{}$

$33 \div 3 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain fires a bright horn beam, then loses a crystal crown.
2. The villain blasts rainbow glitter, then rings a silver bell.
3. The villain creates a starry shield, then clatters away in golden shoes.
4. The villain fires a bright horn beam, then adjusts a jewel saddle.
5. The villain fires a bright horn beam, then shakes a pearl bridle.
6. The villain creates a starry shield, then adjusts a jewel saddle.
7. The villain bounces high on a cloud, then shakes a pearl bridle.
8. The villain creates a starry shield, then shakes a pearl bridle.
9. The villain bounces high on a cloud, then clatters away in golden shoes.
10. The villain fires a bright horn beam, then clatters away in golden shoes.
11. The villain bounces high on a cloud, then adjusts a jewel saddle.
12. The villain zooms on a rainbow path, then adjusts a jewel saddle.

Answer Key

The Case of the Missing Rainbow Prism

Culprit: Sunburst

Horn Beam · Golden Shoes · Right Ear Twitch · Blue Mane · Bright Lights

Trail: Start 21 → Clue 1 20 → Clue 2 13 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT WEAR A CRYSTAL CROWN"

Round 114 to the nearest ten = 110 (T) · Round 2,335 to the nearest hundred = 2300 (I) · Round 7,141 to the nearest thousand = 7000 (Y) · Round 288 to the nearest ten = 290 (S) · Round 1,731 to the nearest hundred = 1700 (W) · Round 306 to the nearest hundred = 300 (A) · Round 2,912 to the nearest hundred = 2900 (E) · Round 366 to the nearest ten = 370 (H) · Round 4,257 to the nearest hundred = 4300 (O) · Round 228 to the nearest ten = 230 (V) · Round 1,092 to the nearest hundred = 1100 (D) · Round 1,292 to the nearest hundred = 1300 (R) · Round 92 to the nearest ten = 90 (C) · Round 4,556 to the nearest thousand = 5000 (N) · Round 429 to the nearest ten = 430 (L)

Clue 2 (Addition): "THE SUSPECTS RIGHT EAR WAS TWITCHING"

$1591 + 1737 = 3328$ (T) · $1698 + 853 = 2551$ (C) · $5274 + 3083 = 8357$ (H) · $2511 + 3427 = 5938$ (A) · $3919 + 3811 = 7730$ (G) · $4697 + 2240 = 6937$ (I) · $4109 + 4430 = 8539$ (U) · $3730 + 4534 = 8264$ (E) · $4459 + 4333 = 8792$ (R) · $4502 + 4208 = 8710$ (P) · $1075 + 948 = 2023$ (W) · $5332 + 3093 = 8425$ (N) · $3675 + 5244 = 8919$ (S)

Clue 3 (Subtraction): "THE VILLAIN RAN AWAY FROM BRIGHT LIGHTS"

$8156 - 1004 = 7152$ (T) · $3038 - 247 = 2791$ (M) · $7115 - 62 = 7053$ (N) · $6458 - 1753 = 4705$ (R) · $6503 - 3610 = 2893$ (F) · $6110 - 1248 = 4862$ (B) · $8481 - 2597 = 5884$ (O) · $3125 - 392 = 2733$ (G) · $8597 - 3293 = 5304$ (V) · $8173 - 2962 = 5211$ (A) · $9253 - 4063 = 5190$ (E) · $6818 - 1325 = 5493$ (L) · $9525 - 2336 = 7189$ (I) · $3464 - 980 = 2484$ (H) · $6194 - 3317 = 2877$ (Y) · $8465 - 1215 = 7250$ (W) · $12624 - 4517 = 8107$ (S)

Clue 4 (Multiplication facts (1-12)): "WE FOUND BLUE MANE HAIR AT THE SCENE"

$7 \times 5 = 35$ (W) · $1 \times 10 = 10$ (E) · $3 \times 10 = 30$ (D) · $12 \times 2 = 24$ (N) · $11 \times 5 = 55$ (H) · $11 \times 6 = 66$ (T) · $2 \times 7 = 14$ (S) · $9 \times 1 = 9$ (F) · $5 \times 5 = 25$ (R) · $10 \times 10 = 100$ (L) · $12 \times 10 = 120$ (U) · $12 \times 9 = 108$ (A) · $4 \times 7 = 28$ (C) · $7 \times 7 = 49$ (I) · $1 \times 5 = 5$ (O) · $11 \times 8 = 88$ (B) · $6 \times 7 = 42$ (M)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Sunburst

$6 \div 2 = 3$ · $24 \div 2 = 12$ · $6 \div 1 = 6$ · $10 \div 10 = 1$ · $12 \div 6 = 2$ · $36 \div 9 = 4$ · $96 \div 12 = 8$ · $55 \div 11 = 5$ · $70 \div 10 = 7$ · $99 \div 11 = 9$ · $33 \div 3 = 11$