



The Mystery of the Missing Golden Horseshoe

Grade 4 math · Subtraction, Addition, Multiplication, Place value, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

During the evening barn checks, someone unlatched the grand champion stall and snuck off with the prized Golden Horseshoe trophy! Detective, search the stable grounds and use your math skills to figure 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 barn bandit is _____

Possible suspects

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

NAME	RIDING STYLE	SADDLE BADGE	REIN GRIP	HAIR COLOR	FAVORITE TREAT
Ludger Beerbaum	Dressage	Leather Feather	Left Handed	Palomino	Sugar Cubes
McLain Ward	Barrel Racing	Leather Feather	Right Handed	Black	Sugar Cubes
Franke Sloothaak	Barrel Racing	Leather Feather	Left Handed	Black	Crisp Carrots
Laura Kraut	Barrel Racing	Copper Star	Left Handed	Chestnut	Crunchy Apples
Beezie Madden	Vaulting	Golden Spur	Right Handed	Chestnut	Crisp Carrots
Luciana Diniz	Vaulting	Leather Feather	Right Handed	Black	Sugar Cubes
Isabell Werth	Dressage	Leather Feather	Left Handed	Black	Crisp Carrots
William Fox Pitt	Barrel Racing	Leather Feather	Left Handed	Black	Sugar Cubes
Anky van Grunsven	Reining	Silver Horseshoe	Right Handed	Black	Crisp Carrots
Henrik von Eckermann	Barrel Racing	Golden Spur	Left Handed	Black	Sugar Cubes
Nick Skelton	Dressage	Silver Horseshoe	Left Handed	Palomino	Sugar Cubes
Steffen Peters	Vaulting	Brass Bell	Left Handed	Black	Crisp Carrots
Jessica Springsteen	Dressage	Copper Star	Left Handed	Palomino	Crisp Carrots
Zara Tindall	Dressage	Copper Star	Right Handed	Palomino	Sugar Cubes
Boyd Martin	Vaulting	Leather Feather	Right Handed	Black	Crisp Carrots
Pippa Funnell	Reining	Copper Star	Left Handed	Black	Crisp Carrots
Kent Farrington	Show Jumping	Brass Bell	Right Handed	Chestnut	Crisp Carrots
Edwina Tops Alexander	Show Jumping	Leather Feather	Left Handed	Black	Crisp Carrots
Steve Guerdat	Reining	Brass Bell	Right Handed	Black	Crunchy Apples
Charlotte Dujardin	Barrel Racing	Copper Star	Left Handed	Black	Sugar Cubes
Ian Millar	Vaulting	Leather Feather	Left Handed	Palomino	Crunchy Apples

CLUE 1

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

[illegible]

$$8827 - 2737 = \boxed{} \rightarrow \boxed{\text{T}}$$

$4268 - 952 = \square \rightarrow \boxed{\mathbf{B}}$

$$9567 - 1064 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$4633 - 2212 = \boxed{} \rightarrow \boxed{0}$$

$$10942 - 4508 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$11041 - 3064 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$6266 - 652 = \boxed{} \rightarrow \boxed{\text{E}}$$

$9589 - 1357 = \boxed{} \rightarrow \boxed{\text{A}}$

$8846 - 1556 = \boxed{} \rightarrow \boxed{\text{N}}$

$5924 - 4134 = \square \rightarrow \boxed{\text{L}}$

$$2191 - 1177 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$6142 - 957 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$8843 - 3834 = \boxed{} \rightarrow \boxed{\text{S}}$$

Scratch space:

CLUE 2

Addition

You tally up the jump heights from the morning practice sessions to trace the culprit's trail.

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

T																		
8204	6886	5924	5797	6075	5924	8505	6310	6212	3118	3469	3424	5924	3118	6886	5924	7412	3424	
										T								
3118	5924	3469	6075	5797	3469	6075	7412	5924	3557	8204	6886	8505	6075	3424				

$4777 + 3427 = \square \rightarrow \boxed{\text{T}}$

$4973 + 2439 = \square \rightarrow \boxed{\text{L}}$

$3485 + 2727 = \square \rightarrow \boxed{\text{Y}}$

$3264 + 2533 = \square \rightarrow \boxed{\text{S}}$

$1744 + 1725 = \square \rightarrow \boxed{\text{I}}$

$2852 + 3072 = \square \rightarrow \boxed{\text{E}}$

$2242 + 4644 = \square \rightarrow \boxed{\text{H}}$

$1614 + 1504 = \square \rightarrow \boxed{\text{R}}$

$3399 + 2911 = \square \rightarrow \boxed{\text{K}}$

$1924 + 4151 = \square \rightarrow \boxed{\text{N}}$

$2386 + 1038 = \square \rightarrow \boxed{\text{D}}$

$5778 + 2727 = \square \rightarrow \boxed{\text{A}}$

$1305 + 2252 = \square \rightarrow \boxed{\text{F}}$

Scratch space:

CLUE 3
Multiplication facts (1-12)

You count the rows of saddle racks lined up in the tack room to find a hidden clue.

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

C						C													
72	50	3	3	22	56	72	3	33	90	121	60	55	25	3	25	88	25	21	56
144	25	50	3	56	81	25	2	50	56	25									

$8 \times 9 = \square \rightarrow \text{C}$

$2 \times 11 = \square \rightarrow \text{O}$

$3 \times 7 = \square \rightarrow \text{F}$

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

$12 \times 5 = \square \rightarrow \text{S}$

$2 \times 1 = \square \rightarrow \text{G}$

$10 \times 5 = \square \rightarrow \text{A}$

$3 \times 11 = \square \rightarrow \text{U}$

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

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

$9 \times 9 = \square \rightarrow \text{H}$

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

$8 \times 7 = \square \rightarrow \text{T}$

$1 \times 3 = \square \rightarrow \text{R}$

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

$10 \times 9 = \square \rightarrow \text{M}$

Scratch space:

CLUE 4 Place value

You decode the digits on the digital stable timer to reveal an important piece of evidence.

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

B																	
500	5000	20	8000	100	200	40	1000	20	7000	9000	200	90	10	1000	10		
200	80	6000	40	40	10	9000	6000	7000	200	20	9000	9000	5000	10			

What is the value of the 5 in 516? → **B**

What is the value of the 7 in 7,903? → **N**

What is the value of the 1 in 1,893? → **R**

What is the value of the 1 in 6,145? → **K**

What is the value of the 2 in 249? → **S**

What is the value of the 9 in 192? → **W**

What is the value of the 8 in 484? → **P**

What is the value of the 6 in 6,753? → **O**

What is the value of the 8 in 58,724? → **C**

What is the value of the 9 in 59,865? → **D**

What is the value of the 1 in 910? → **E**

What is the value of the 2 in 924? → **A**

What is the value of the 4 in 6,843? → **T**

What is the value of the 5 in 5,248? → **L**

Scratch space:

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

You divide the bags of oats equally among the feeding buckets to spot the suspect's tracks.

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:

$14 \div 2 = \boxed{}$

$4 \div 2 = \boxed{}$

$12 \div 12 = \boxed{}$

$32 \div 4 = \boxed{}$

$25 \div 5 = \boxed{}$

$40 \div 4 = \boxed{}$

$66 \div 11 = \boxed{}$

$27 \div 9 = \boxed{}$

$8 \div 2 = \boxed{}$

$132 \div 12 = \boxed{}$

$81 \div 9 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain leaped the high fences, then tied a leather feather to the reins.
2. The villain performed fancy trotting steps, then tied a leather feather to the reins.
3. The villain executed sharp sliding stops, then flashed a shiny silver horseshoe badge.
4. The villain raced around the barrels, then pinned a golden spur to the saddle.
5. The villain leaped the high fences, then fastened a copper star on the blanket.
6. The villain balanced atop the galloping horse, then jingled a small brass bell on the bridle.
7. The villain executed sharp sliding stops, then fastened a copper star on the blanket.
8. The villain balanced atop the galloping horse, then flashed a shiny silver horseshoe badge.
9. The villain leaped the high fences, then pinned a golden spur to the saddle.
10. The villain raced around the barrels, then jingled a small brass bell on the bridle.
11. The villain executed sharp sliding stops, then pinned a golden spur to the saddle.
12. The villain raced around the barrels, then tied a leather feather to the reins.

Answer Key

The Mystery of the Missing Golden Horseshoe

Culprit: Franke Sloothaak

Barrel Racing · Leather Feather · Left Handed · Black · Crisp Carrots

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

Clue 1 (Subtraction): "THE BANDIT DOES NOT WEAR A BRASS BELL"

$8827 - 2737 = 6090$ (T) · $4268 - 952 = 3316$ (B) · $9567 - 1064 = 8503$ (H) · $4633 - 2212 = 2421$ (O) · $10942 - 4508 = 6434$ (D) · $11041 - 3064 = 7977$ (R) · $6266 - 652 = 5614$ (E) · $9589 - 1357 = 8232$ (A) · $8846 - 1556 = 7290$ (N) · $5924 - 4134 = 1790$ (L) · $2191 - 1177 = 1014$ (I) · $6142 - 957 = 5185$ (W) · $8843 - 3834 = 5009$ (S)

Clue 2 (Addition): "THE SNEAKY RIDER HELD REINS IN LEFT HAND"

$4777 + 3427 = 8204$ (T) · $4973 + 2439 = 7412$ (L) · $3485 + 2727 = 6212$ (Y) · $3264 + 2533 = 5797$ (S) · $1744 + 1725 = 3469$ (I) · $2852 + 3072 = 5924$ (E) · $2242 + 4644 = 6886$ (H) · $1614 + 1504 = 3118$ (R) · $3399 + 2911 = 6310$ (K) · $1924 + 4151 = 6075$ (N) · $2386 + 1038 = 3424$ (D) · $5778 + 2727 = 8505$ (A) · $1305 + 2252 = 3557$ (F)

Clue 3 (Multiplication facts (1-12)): "CARROT CRUMBS WERE LEFT NEAR THE GATE"

$8 \times 9 = 72$ (C) · $2 \times 11 = 22$ (O) · $3 \times 7 = 21$ (F) · $11 \times 11 = 121$ (B) · $12 \times 5 = 60$ (S) · $2 \times 1 = 2$ (G) · $10 \times 5 = 50$ (A) · $3 \times 11 = 33$ (U) · $5 \times 11 = 55$ (W) · $12 \times 12 = 144$ (N) · $9 \times 9 = 81$ (H) · $8 \times 11 = 88$ (L) · $8 \times 7 = 56$ (T) · $1 \times 3 = 3$ (R) · $5 \times 5 = 25$ (E) · $10 \times 9 = 90$ (M)

Clue 4 (Place value): "BLACK STRANDS WERE SPOTTED ON SADDLE"

What is the value of the 5 in 516? = 500 (B) · What is the value of the 7 in 7,903? = 7000 (N) · What is the value of the 1 in 1,893? = 1000 (R) · What is the value of the 1 in 6,145? = 100 (K) · What is the value of the 2 in 249? = 200 (S) · What is the value of the 9 in 192? = 90 (W) · What is the value of the 8 in 484? = 80 (P) · What is the value of the 6 in 6,753? = 6000 (O) · What is the value of the 8 in 58,724? = 8000 (C) · What is the value of the 9 in 59,865? = 9000 (D) · What is the value of the 1 in 910? = 10 (E) · What is the value of the 2 in 924? = 20 (A) · What is the value of the 4 in 6,843? = 40 (T) · What is the value of the 5 in 5,248? = 5000 (L)

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

$14 \div 2 = 7$ · $4 \div 2 = 2$ · $12 \div 12 = 1$ · $32 \div 4 = 8$ · $25 \div 5 = 5$ · $40 \div 4 = 10$ · $66 \div 11 = 6$ · $27 \div 9 = 3$ · $8 \div 2 = 4$ · $132 \div 12 = 11$ · $81 \div 9 = 9$