



The Mystery of Silver Hoof Ranch

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

Detective: _____ **Date:** _____

A sneaky horse rustler has taken the championship trophy right before the annual Silver Hoof Grand Prix. The head trainer noticed unusual tracks leading out of the main arena. Use your math and logic skills to uncover which rider committed the act!

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 horse rustler is _____

Possible suspects

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

NAME	RIDING SKILL	RIDING GEAR	DOMINANT HAND	MANE HAIR FOUND	HORSE TREAT USED
Anky van Grunsven	Trick Riding	Silver Spurs	Left Handed	Chestnut Hair	Sugar Cubes
Phillip Dutton	Show Jumping	Padded Halter	Left Handed	Palomino Hair	Sugar Cubes
Laura Kraut	Dressage	Golden Bridle	Right Handed	Black Hair	Sugar Cubes
Steve Guerdat	Barrel Racing	Leather Saddle	Left Handed	Palomino Hair	Sweet Apples
Boyd Martin	Barrel Racing	Padded Halter	Right Handed	Palomino Hair	Sugar Cubes
Nick Skelton	Show Jumping	Leather Saddle	Left Handed	Black Hair	Sweet Apples
Pippa Funnell	Reining	Silver Spurs	Left Handed	Palomino Hair	Sugar Cubes
Charlotte Dujardin	Reining	Golden Bridle	Left Handed	Chestnut Hair	Crunchy Carrots
Frankie Dettori	Show Jumping	Golden Bridle	Left Handed	Palomino Hair	Sugar Cubes
Sam Griffiths	Show Jumping	Leather Saddle	Left Handed	Black Hair	Sugar Cubes
Ludger Beerbaum	Reining	Silver Spurs	Left Handed	Black Hair	Sweet Apples
McLain Ward	Show Jumping	Leather Saddle	Right Handed	Palomino Hair	Sweet Apples
Marcus Ehning	Show Jumping	Golden Bridle	Left Handed	Palomino Hair	Crunchy Carrots
Martin Fuchs	Barrel Racing	Leather Saddle	Left Handed	Palomino Hair	Crunchy Carrots
Edwina Tops Alexander	Show Jumping	Silver Spurs	Left Handed	Palomino Hair	Sweet Apples
Isabell Werth	Reining	Padded Halter	Left Handed	Chestnut Hair	Sugar Cubes
William Fox Pitt	Barrel Racing	Padded Halter	Left Handed	Black Hair	Sweet Apples
Luciana Diniz	Show Jumping	Velvet Helmet	Left Handed	Chestnut Hair	Sugar Cubes
Penelope Leprevost	Reining	Golden Bridle	Left Handed	Palomino Hair	Sugar Cubes
Beezie Madden	Dressage	Velvet Helmet	Left Handed	Palomino Hair	Sugar Cubes
Rodrigo Pessoa	Trick Riding	Padded Halter	Left Handed	Palomino Hair	Sugar Cubes

CLUE 1 Addition

To count all the iron horseshoes brought to the smithy, you sum up the daily deliveries from each barn.

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

T																	T
5003	6434	4000	8150	6964	5683	5683	9883	6964	2232	6093	2306	4000	7819	2232	2306	5003	

8615	4000	9883	7137	9883	3255	2306	5683	6093	4000	2232	2722	7137	6964	6093	5683	4000

$1893 + 3110 = \boxed{} \rightarrow \boxed{\text{T}}$

$5765 + 4118 = \boxed{} \rightarrow \boxed{\text{A}}$

$2083 + 4351 = \boxed{} \rightarrow \boxed{\text{H}}$

$3050 + 2633 = \boxed{} \rightarrow \boxed{\text{L}}$

$1505 + 1750 = \boxed{} \rightarrow \boxed{\text{G}}$

$2040 + 1960 = \boxed{} \rightarrow \boxed{\text{E}}$

$4209 + 1884 = \boxed{} \rightarrow \boxed{\text{D}}$

$1337 + 1385 = \boxed{} \rightarrow \boxed{\text{B}}$

$3751 + 3386 = \boxed{} \rightarrow \boxed{\text{R}}$

$4038 + 2926 = \boxed{} \rightarrow \boxed{\text{I}}$

$4521 + 3629 = \boxed{} \rightarrow \boxed{\text{V}}$

$1064 + 1168 = \boxed{} \rightarrow \boxed{\text{N}}$

$5878 + 2737 = \boxed{} \rightarrow \boxed{\text{W}}$

$2695 + 5124 = \boxed{} \rightarrow \boxed{\text{S}}$

$934 + 1372 = \boxed{} \rightarrow \boxed{\text{O}}$

Scratch space:

CLUE 2

Subtraction

You inspect the feed bin logs to calculate how many oats remain after the morning feeding.

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

T					T												T
5090	6737	4090	5028	5141	5090	3525	4090	7877	7877	7877	4317	5028	4317	5196	4090	2550	5090
6737	4317	3525	3372	4090	3372	3815	5141	3372	4090	3815							

$$6738 - 1648 = \square \rightarrow \boxed{\text{T}}$$

$$6246 - 2156 = \square \rightarrow \boxed{\text{E}}$$

$$6131 - 2316 = \square \rightarrow \boxed{\text{R}}$$

$$6264 - 1236 = \square \rightarrow \boxed{\text{W}}$$

$$5169 - 2619 = \square \rightarrow \boxed{\text{F}}$$

$$7364 - 627 = \square \rightarrow \boxed{\text{H}}$$

$$11486 - 3609 = \square \rightarrow \boxed{\text{S}}$$

$$7888 - 3571 = \square \rightarrow \boxed{\text{A}}$$

$$8776 - 3580 = \square \rightarrow \boxed{\text{L}}$$

$$6259 - 2887 = \square \rightarrow \boxed{\text{D}}$$

$$4904 - 1379 = \square \rightarrow \boxed{\text{N}}$$

$$7621 - 2480 = \square \rightarrow \boxed{\text{I}}$$

Scratch space:

CLUE 3
Multiplication facts (1-12)

By looking at the rows of stables with equal numbers of stalls, you calculate the total capacity.

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

T																		
30	22	110	56	35	84	84	55	48	20	56	56	30	20	60	60	110	3	

		T												
48	64	30	22	56	4	120	20	6	132	4	14	110	56	

$6 \times 5 = \square \rightarrow \text{T}$

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

$11 \times 10 = \square \rightarrow \text{E}$

$10 \times 6 = \square \rightarrow \text{L}$

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

$4 \times 5 = \square \rightarrow \text{A}$

$8 \times 8 = \square \rightarrow \text{I}$

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

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

$2 \times 2 = \square \rightarrow \text{U}$

$11 \times 12 = \square \rightarrow \text{C}$

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

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

$12 \times 7 = \square \rightarrow \text{O}$

$6 \times 1 = \square \rightarrow \text{R}$

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

$8 \times 6 = \square \rightarrow \text{W}$

Scratch space:

CLUE 4 Rounding

The digital arena timer only displays rounded lap times, giving you an estimate of the trail speed.

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

T						T				T									
2900	1100	290	50	290	2900	290	90	2900	4300	2300	290	20	5000	30	70	50			
													T						
300	170	3000	5000	9000	4300	70	5000	1100	170	4300	430	170	2900	130	90	290	70	290	

Round 2,872 to the nearest hundred → **T**

Round 166 to the nearest ten → **A**

Round 289 to the nearest ten → **E**

Round 1,059 to the nearest hundred → **H**

Round 70 to the nearest ten → **N**

Round 52 to the nearest ten → **D**

Round 132 to the nearest ten → **S**

Round 262 to the nearest hundred → **P**

Round 429 to the nearest ten → **R**

Round 93 to the nearest ten → **C**

Round 2,269 to the nearest hundred → **V**

Round 32 to the nearest ten → **U**

Round 19 to the nearest ten → **F**

Round 4,269 to the nearest hundred → **I**

Round 2,992 to the nearest thousand → **L**

Round 4,750 to the nearest thousand → **O**

Round 9,402 to the nearest thousand → **M**

Scratch space:

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

You split the batch of fresh carrots evenly among the paddocks to figure out each portion.

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:

$9 \div 1 = \boxed{}$

$144 \div 12 = \boxed{}$

$40 \div 4 = \boxed{}$

$66 \div 11 = \boxed{}$

$33 \div 11 = \boxed{}$

$12 \div 12 = \boxed{}$

$4 \div 1 = \boxed{}$

$24 \div 12 = \boxed{}$

$110 \div 10 = \boxed{}$

$40 \div 8 = \boxed{}$

$84 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain dashed around barrels, then strapped on a black velvet helmet.
2. The villain dashed around barrels, then adjusted bright silver spurs.
3. The villain skidded to sudden stops, then fastened a shiny golden bridle.
4. The villain skidded to sudden stops, then buckled a soft padded halter.
5. The villain skidded to sudden stops, then cinched a heavy leather saddle.
6. The villain dashed around barrels, then buckled a soft padded halter.
7. The villain performed daring saddle tricks, then strapped on a black velvet helmet.
8. The villain leaped high fences, then buckled a soft padded halter.
9. The villain guided precise arena trots, then strapped on a black velvet helmet.
10. The villain skidded to sudden stops, then adjusted bright silver spurs.
11. The villain guided precise arena trots, then cinched a heavy leather saddle.
12. The villain performed daring saddle tricks, then buckled a soft padded halter.

Answer Key

The Mystery of Silver Hoof Ranch

Culprit: Phillip Dutton

Show Jumping · Padded Halter · Left Handed · Palomino Hair · Sugar Cubes

Trail: Start 21 → Clue 1 16 → Clue 2 14 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT WEAR A GOLDEN BRIDLE"

$1893 + 3110 = 5003$ (T) · $5765 + 4118 = 9883$ (A) · $2083 + 4351 = 6434$ (H) · $3050 + 2633 = 5683$ (L) · $1505 + 1750 = 3255$ (G) · $2040 + 1960 = 4000$ (E) · $4209 + 1884 = 6093$ (D) · $1337 + 1385 = 2722$ (B) · $3751 + 3386 = 7137$ (R) · $4038 + 2926 = 6964$ (I) · $4521 + 3629 = 8150$ (V) · $1064 + 1168 = 2232$ (N) · $5878 + 2737 = 8615$ (W) · $2695 + 5124 = 7819$ (S) · $934 + 1372 = 2306$ (O)

Clue 2 (Subtraction): "THE WITNESS SAW A LEFT HANDED RIDER"

$6738 - 1648 = 5090$ (T) · $6246 - 2156 = 4090$ (E) · $6131 - 2316 = 3815$ (R) · $6264 - 1236 = 5028$ (W) · $5169 - 2619 = 2550$ (F) · $7364 - 627 = 6737$ (H) · $11486 - 3609 = 7877$ (S) · $7888 - 3571 = 4317$ (A) · $8776 - 3580 = 5196$ (L) · $6259 - 2887 = 3372$ (D) · $4904 - 1379 = 3525$ (N) · $7621 - 2480 = 5141$ (I)

Clue 3 (Multiplication facts (1-12)): "THE SNOOP WAS STALLED WITH SUGAR CUBES"

$6 \times 5 = 30$ (T) · $5 \times 7 = 35$ (N) · $11 \times 10 = 110$ (E) · $10 \times 6 = 60$ (L) · $3 \times 1 = 3$ (D) · $4 \times 5 = 20$ (A) · $8 \times 8 = 64$ (I) · $11 \times 2 = 22$ (H) · $10 \times 12 = 120$ (G) · $2 \times 2 = 4$ (U) · $11 \times 12 = 132$ (C) · $8 \times 7 = 56$ (S) · $5 \times 11 = 55$ (P) · $12 \times 7 = 84$ (O) · $6 \times 1 = 6$ (R) · $7 \times 2 = 14$ (B) · $8 \times 6 = 48$ (W)

Clue 4 (Rounding): "THE DETECTIVE FOUND PALOMINO HAIR AT SCENE"

Round 2,872 to the nearest hundred = 2900 (T) · Round 166 to the nearest ten = 170 (A) · Round 289 to the nearest ten = 290 (E) · Round 1,059 to the nearest hundred = 1100 (H) · Round 70 to the nearest ten = 70 (N) · Round 52 to the nearest ten = 50 (D) · Round 132 to the nearest ten = 130 (S) · Round 262 to the nearest hundred = 300 (P) · Round 429 to the nearest ten = 430 (R) · Round 93 to the nearest ten = 90 (C) · Round 2,269 to the nearest hundred = 2300 (V) · Round 32 to the nearest ten = 30 (U) · Round 19 to the nearest ten = 20 (F) · Round 4,269 to the nearest hundred = 4300 (I) · Round 2,992 to the nearest thousand = 3000 (L) · Round 4,750 to the nearest thousand = 5000 (O) · Round 9,402 to the nearest thousand = 9000 (M)

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

$9 \div 1 = 9$ · $144 \div 12 = 12$ · $40 \div 4 = 10$ · $66 \div 11 = 6$ · $33 \div 11 = 3$ · $12 \div 12 = 1$ · $4 \div 1 = 4$ · $24 \div 12 = 2$ · $110 \div 10 = 11$ · $40 \div 8 = 5$ · $84 \div 12 = 7$