The Great Stable Switcheroo

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

Detective: _____ **Date:** _____

A mysterious Rogue Rider has snuck into the sanctuary and switched the championship horses in their stalls! The Head Stablekeeper needs our help to track down the culprit before the morning ride 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 Rogue Rider is _____

Possible suspects

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

NAME	RIDING GEAR	HORSE BAIT	HANDEDNESS	MANE STRANDS	SHED FEAR
Dr Fager	Bareback Riding	Oat Cakes	Right-handed whip hold	Golden Palomino strands	Allergic to clover pollen
Black Beauty	Western Saddle	Oat Cakes	Left-handed whip hold	Dark Chestnut strands	Scared by stable owls
Count Fleet	Jumping Harness	Sweet Apples	Left-handed whip hold	Silver Stallion strands	Startled by camera flashes
Omaha	Jumping Harness	Sweet Apples	Left-handed whip hold	Silver Stallion strands	Allergic to clover pollen
Kelso	English Saddle	Peppermint Treats	Right-handed whip hold	Golden Palomino strands	Startled by camera flashes
Seattle Slew	English Saddle	Oat Cakes	Right-handed whip hold	Golden Palomino strands	Scared by stable owls
Seabiscuit	Jumping Harness	Oat Cakes	Left-handed whip hold	Silver Stallion strands	Allergic to clover pollen
Silver	Jumping Harness	Oat Cakes	Right-handed whip hold	Golden Palomino strands	Startled by camera flashes
Trigger	Bareback Riding	Sweet Apples	Left-handed whip hold	Dark Chestnut strands	Scared by stable owls
Man o War	Trick Stirrups	Sweet Apples	Left-handed whip hold	Golden Palomino strands	Startled by camera flashes
Affirmed	Bareback Riding	Peppermint Treats	Right-handed whip hold	Golden Palomino strands	Startled by camera flashes
Whirlaway	Jumping Harness	Alfalfa Bundles	Right-handed whip hold	Silver Stallion strands	Startled by camera flashes
Assault	Western Saddle	Peppermint Treats	Right-handed whip hold	Silver Stallion strands	Allergic to clover pollen
Sir Barton	Jumping Harness	Peppermint Treats	Left-handed whip hold	Golden Palomino strands	Scared by stable owls
Cigar	Jumping Harness	Peppermint Treats	Left-handed whip hold	Dark Chestnut strands	Startled by camera flashes
Red Rum	Western Saddle	Peppermint Treats	Right-handed whip hold	Dark Chestnut strands	Startled by camera flashes
War Admiral	Bareback Riding	Oat Cakes	Right-handed whip hold	Golden Palomino strands	Scared by stable owls
Citation	Western Saddle	Sweet Apples	Right-handed whip hold	Golden Palomino strands	Startled by camera flashes
Secretariat	Trick Stirrups	Alfalfa Bundles	Right-handed whip hold	Golden Palomino strands	Startled by camera flashes
Phar Lap	Trick Stirrups	Sweet Apples	Right-handed whip hold	Golden Palomino strands	Scared by stable owls
Pegasus	Trick Stirrups	Alfalfa Bundles	Right-handed whip hold	Dark Chestnut strands	Startled by camera flashes

CLUE 1 Multiplication facts (1-12)

> We search the feeding stalls. There are multiple rows of horse treat boxes. If we multiply the rows by the boxes in each row, we will unlock the first clue.

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

T																		T	
11	30	44	90	40	3	21	44	90	2	15	44	90	15	2	15	6	40	11	
21	48	44	14	88	72	14	88	72	14	8	21	6	15	88	44	48			

1 × 11 = ☐ → T

9 × 10 = ☐ → R

7 × 3 = ☐ → U

7 × 2 = ☐ → A

12 × 4 = ☐ → S

4 × 11 = ☐ → E

3 × 5 = ☐ → D

5 × 8 = ☐ → O

3 × 1 = ☐ → G

8 × 1 = ☐ → B

3 × 2 = ☐ → N

11 × 8 = ☐ → L

2 × 1 = ☐ → I

3 × 10 = ☐ → H

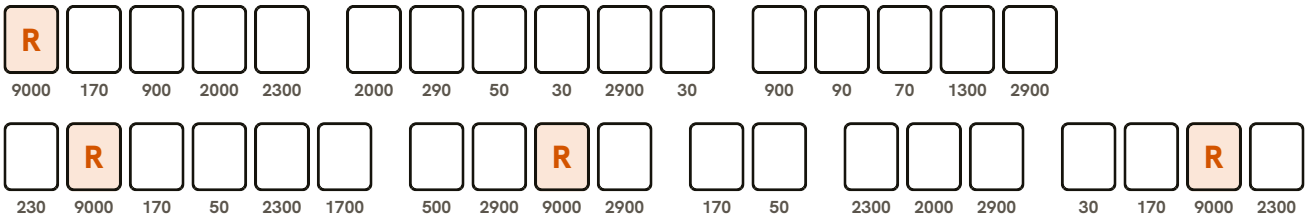
8 × 9 = ☐ → F

Scratch space:

CLUE 2 Rounding

We find a scale used for weighing grain sacks, but the dial is dusty. We must round the weight of the sack to the nearest ten to read the next clue.

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



Round 8,683 to the nearest thousand ☐ → R

Round 1,301 to the nearest hundred ☐ → V

Round 526 to the nearest hundred ☐ → W

Round 2,862 to the nearest hundred ☐ → E

Round 1,723 to the nearest hundred ☐ → S

Round 852 to the nearest hundred ☐ → G

Round 89 to the nearest ten ☐ → L

Round 2,332 to the nearest hundred ☐ → T

Round 174 to the nearest ten ☐ → I

Round 232 to the nearest ten ☐ → P

Round 31 to the nearest ten ☐ → D

Round 73 to the nearest ten ☐ → O

Round 51 to the nearest ten ☐ → N

Round 286 to the nearest ten ☐ → A

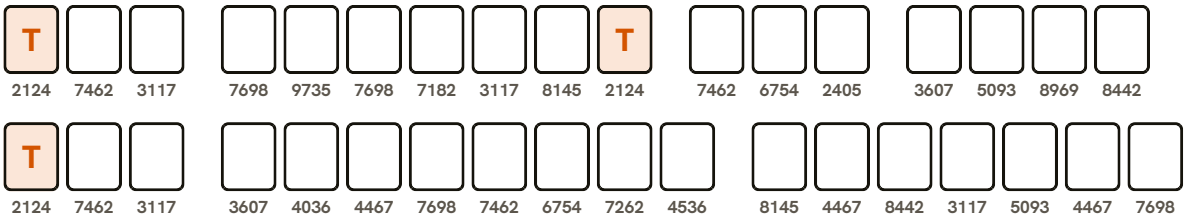
Round 2,472 to the nearest thousand ☐ → H

Scratch space:

CLUE 3 Addition

> The horseshoes are scattered in the barn yard. We must add up all the steel shoes we find in the three paddocks to put together the next clue.

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



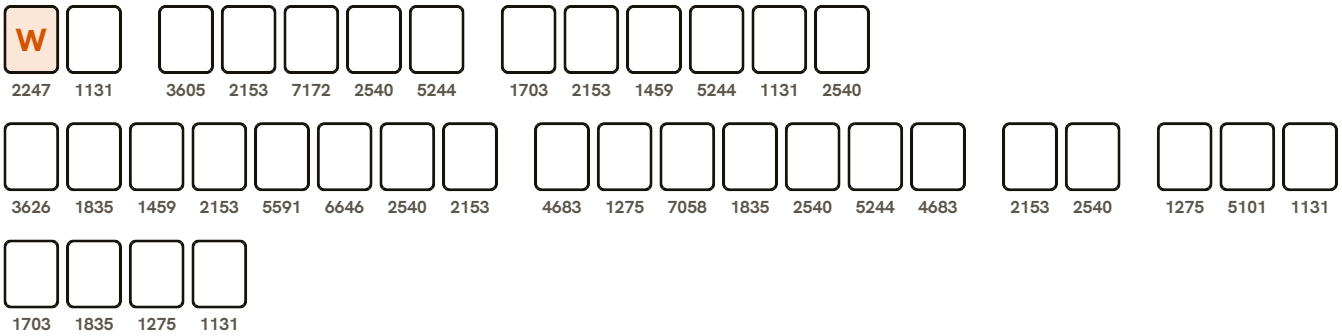
1363 + 761 = ☐ → T	2070 + 1537 = ☐ → F	1582 + 2885 = ☐ → A
3497 + 5472 = ☐ → O	2647 + 5795 = ☐ → M	2471 + 4283 = ☐ → I
1448 + 957 = ☐ → D	954 + 2163 = ☐ → E	1547 + 3546 = ☐ → R
3864 + 3398 = ☐ → N	2049 + 2487 = ☐ → G	2430 + 1606 = ☐ → L
5035 + 3110 = ☐ → C	3621 + 4077 = ☐ → S	5814 + 3921 = ☐ → U
2779 + 4683 = ☐ → H	3568 + 3614 = ☐ → P	

Scratch space:

CLUE 4 Subtraction

> The rogue rider emptied some of the water buckets. If we subtract the remaining water from the full tank size, the difference reveals a clue.

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



3761 - 1514 = ☐ → W

9298 - 4197 = ☐ → H

8463 - 1817 = ☐ → I

2839 - 686 = ☐ → O

9791 - 2619 = ☐ → U

4296 - 691 = ☐ → F

10899 - 3841 = ☐ → R

7516 - 2272 = ☐ → D

7885 - 4259 = ☐ → P

4908 - 3073 = ☐ → A

5872 - 3332 = ☐ → N

5789 - 4658 = ☐ → E

2141 - 866 = ☐ → T

3890 - 2431 = ☐ → L

5210 - 527 = ☐ → S

5365 - 3662 = ☐ → G

7343 - 1752 = ☐ → M

Scratch space:

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

> We need to split a bundle of sweet carrots equally among the colts. Dividing the carrots evenly tells us which way the suspect fled.

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:

77 ÷ 7 = ☐ | 27 ÷ 3 = ☐ | 40 ÷ 8 = ☐ | 6 ÷ 6 = ☐ | 28 ÷ 4 = ☐

72 ÷ 12 = ☐ | 132 ÷ 11 = ☐ | 16 ÷ 8 = ☐ | 50 ÷ 5 = ☐ | 16 ÷ 2 = ☐

6 ÷ 2 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain rides off bareback, then bribes the ponies with sweet apples.
2. The villain clears fences with a jumping harness, then quiets the horses with peppermint treats.
3. The villain saddles up with a western saddle, then shares a bale of alfalfa bundles.
4. The villain saddles up with a western saddle, then bribes the ponies with sweet apples.
5. The villain rides off bareback, then quiets the horses with peppermint treats.
6. The villain mounts with an english saddle, then bribes the ponies with sweet apples.
7. The villain saddles up with a western saddle, then feeds them homemade oat cakes.
8. The villain leaps using trick stirrups, then bribes the ponies with sweet apples.
9. The villain clears fences with a jumping harness, then feeds them homemade oat cakes.
10. The villain leaps using trick stirrups, then quiets the horses with peppermint treats.
11. The villain mounts with an english saddle, then quiets the horses with peppermint treats.
12. The villain rides off bareback, then coaxes the herd with molasses drops.

TEACHER / PARENT

Answer Key

The Great Stable Switcheroo

Culprit: Citation

Western Saddle · Sweet Apples · Right-handed whip hold · Golden Palomino strands · Startled by camera flashes

Trail: Start 21 → Clue 1 18 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE ROGUE RIDER DID NOT USE ALFALFA BUNDLES"

1 × 11 = 11 (T) · 9 × 10 = 90 (R) · 7 × 3 = 21 (U) · 7 × 2 = 14 (A) · 12 × 4 = 48 (S) · 4 × 11 = 44 (E) · 3 × 5 = 15 (D) · 5 × 8 = 40 (O) · 3 × 1 = 3 (G) · 8 × 1 = 8 (B) · 3 × 2 = 6 (N) · 11 × 8 = 88 (L) · 2 × 1 = 2 (I) · 3 × 10 = 30 (H) · 8 × 9 = 72 (F)

Clue 2 (Rounding): "RIGHT HANDED GLOVE PRINTS WERE IN THE DIRT"

Round 8,683 to the nearest thousand = 9000 (R) · Round 1,301 to the nearest hundred = 1300 (V) · Round 526 to the nearest hundred = 500 (W) · Round 2,862 to the nearest hundred = 2900 (E) · Round 1,723 to the nearest hundred = 1700 (S) · Round 852 to the nearest hundred = 900 (G) · Round 89 to the nearest ten = 90 (L) · Round 2,332 to the nearest hundred = 2300 (T) · Round 174 to the nearest ten = 170 (I) · Round 232 to the nearest ten = 230 (P) · Round 31 to the nearest ten = 30 (D) · Round 73 to the nearest ten = 70 (O) · Round 51 to the nearest ten = 50 (N) · Round 286 to the nearest ten = 290 (A) · Round 2,472 to the nearest thousand = 2000 (H)

Clue 3 (Addition): "THE SUSPECT HID FROM THE FLASHING CAMERAS"

1363 + 761 = 2124 (T) · 2070 + 1537 = 3607 (F) · 1582 + 2885 = 4467 (A) · 3497 + 5472 = 8969 (O) · 2647 + 5795 = 8442 (M) · 2471 + 4283 = 6754 (I) · 1448 + 957 = 2405 (D) · 954 + 2163 = 3117 (E) · 1547 + 3546 = 5093 (R) · 3864 + 3398 = 7262 (N) · 2049 + 2487 = 4536 (G) · 2430 + 1606 = 4036 (L) · 5035 + 3110 = 8145 (C) · 3621 + 4077 = 7698 (S) · 5814 + 3921 = 9735 (U) · 2779 + 4683 = 7462 (H) · 3568 + 3614 = 7182 (P)

Clue 4 (Subtraction): "WE FOUND GOLDEN PALOMINO STRANDS ON THE GATE"

3761 - 1514 = 2247 (W) · 9298 - 4197 = 5101 (H) · 8463 - 1817 = 6646 (I) · 2839 - 686 = 2153 (O) · 9791 - 2619 = 7172 (U) · 4296 - 691 = 3605 (F) · 10899 - 3841 = 7058 (R) · 7516 - 2272 = 5244 (D) · 7885 - 4259 = 3626 (P) · 4908 - 3073 = 1835 (A) · 5872 - 3332 = 2540 (N) · 5789 - 4658 = 1131 (E) · 2141 - 866 = 1275 (T) · 3890 - 2431 = 1459 (L) · 5210 - 527 = 4683 (S) · 5365 - 3662 = 1703 (G) · 7343 - 1752 = 5591 (M)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Citation

77 ÷ 7 = 11 · 27 ÷ 3 = 9 · 40 ÷ 8 = 5 · 6 ÷ 6 = 1 · 28 ÷ 4 = 7 · 72 ÷ 12 = 6 · 132 ÷ 11 = 12 · 16 ÷ 8 = 2 · 50 ÷ 5 = 10 · 16 ÷ 2 = 8 · 6 ÷ 2 = 3