



Case of the Demolition Derby Bandit

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

Detective: _____ Date: _____

On the biggest night of the year, the Derby Champion vanished right after the final smash-up. All that was left was a busted fence and a trail of fat tire tracks. Grab your clipboard, junior detective, and figure out which monster truck driver took off with our champ.

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 Demolition Bandit is _____

Possible suspects

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

NAME	SIGNATURE MOVE	PIT TRICK	DRIVER	TRUCK COLOR	WEAK SPOT
Lulu Lugnut	Mud Bog Master	Ramp Builder	boy driver	red	flat tires
Rex Roadkill	Wheelie Walker	Engine Roar	girl driver	red	muddy ramps
Buck Crankshaft	Car Crusher	Engine Roar	girl driver	red	low fuel
Cleo Crusher	Car Crusher	Nitro Boost	boy driver	blue	flat tires
Boomer Boltz	Car Crusher	Ramp Builder	girl driver	red	muddy ramps
Wanda Wheelie	Big Air Jumper	Tire Shredder	boy driver	blue	flat tires
Spike Axleton	Wheelie Walker	Nitro Boost	boy driver	red	flat tires
Tank Turner	Mud Bog Master	Engine Roar	boy driver	blue	low fuel
Ace Ironside	Big Air Jumper	Nitro Boost	boy driver	green	muddy ramps
Daisy Dynamo	Mud Bog Master	Tire Shredder	girl driver	red	flat tires
Greta Grinder	Mud Bog Master	Smoke Screen	boy driver	blue	flat tires
Chip Chassis	Wheelie Walker	Tire Shredder	girl driver	green	low fuel
Mabel Mudslinger	Wheelie Walker	Smoke Screen	boy driver	blue	flat tires
Max Mufflers	Donut Spinner	Nitro Boost	boy driver	blue	flat tires
Sadie Smasher	Car Crusher	Engine Roar	girl driver	red	muddy ramps
Tilly Torque	Mud Bog Master	Engine Roar	girl driver	blue	flat tires
Gus Gravel	Car Crusher	Smoke Screen	boy driver	blue	muddy ramps
Penny Piston	Mud Bog Master	Tire Shredder	boy driver	red	muddy ramps
Rosie Revs	Donut Spinner	Engine Roar	girl driver	red	low fuel
Moe Monster	Big Air Jumper	Smoke Screen	girl driver	green	flat tires
Vera Vortex	Donut Spinner	Engine Roar	girl driver	green	muddy ramps

CLUE 1

The arena scoreboard only flashes rounded numbers, so round the bandit's lap time to see which pit trick the truck could not pull off.

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

470 20 200 280 3100 70 70 3000 3100 7000 30000 3000 7000 7000 20000 470

50000 20 47000 200 28000 470 3100 47000 200 50000

Round 473 to the nearest ten $\rightarrow$ **T**

Round 47,480 to the nearest thousand $\rightarrow$ **R**

Round 47,959 to the nearest ten thousand $\rightarrow$ **S**

Round 3,478 to the nearest thousand → **A**

Round 282 to the nearest ten $\rightarrow$ **V**

Round 225 to the nearest hundred $\rightarrow$ **E**

Round 7,172 to the nearest thousand → **N**

Round 27,750 to the nearest thousand → **D**

Round 3,133 to the nearest hundred $\rightarrow$

Round 66 to the nearest ten $\rightarrow$ **L**

Round 19,922 to the nearest ten thousand $\rightarrow$

Round 326,878 to the nearest hundred thousand → **C**

Round 24 to the nearest ten $\rightarrow$ **H**

Scratch space:

CLUE 2 Addition

Counting up all the smashed cars in the pile tells you how many witnesses saw the driver, so add the tallies to learn if it was a boy or a girl.

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

A 2637	4866	5846	8258	8615	3063	7005	7005	7005	A 2637	4866	A 2637	7610	8073	5331	2731	4692	5846	7770
8258	7781	3063	4866	7781	3063	3063	4707											

$1131 + 1506 = \square \rightarrow \boxed{\text{A}}$	$2806 + 5452 = \square \rightarrow \boxed{\text{T}}$	$3415 + 5200 = \square \rightarrow \boxed{\text{N}}$
$3127 + 2719 = \square \rightarrow \boxed{\text{I}}$	$3442 + 3563 = \square \rightarrow \boxed{\text{S}}$	$4209 + 3864 = \square \rightarrow \boxed{\text{O}}$
$3832 + 3949 = \square \rightarrow \boxed{\text{H}}$	$1516 + 1547 = \square \rightarrow \boxed{\text{E}}$	$2501 + 2830 = \square \rightarrow \boxed{\text{Y}}$
$4110 + 3500 = \square \rightarrow \boxed{\text{B}}$	$1082 + 1649 = \square \rightarrow \boxed{\text{G}}$	$2230 + 2477 = \square \rightarrow \boxed{\text{L}}$
$1560 + 3306 = \square \rightarrow \boxed{\text{W}}$	$1881 + 2811 = \square \rightarrow \boxed{\text{R}}$	$3739 + 4031 = \square \rightarrow \boxed{\text{P}}$

Scratch space:

Subtraction

The bandit started with a full row of barrels and knocked some over, so subtract to find out which weak spot the guards used to slow it down.

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

The diagram consists of two rows of boxes. The top row has 18 boxes, and the bottom row has 12 boxes. Some boxes are shaded orange and contain the letter 'G'. Below each box is a number.

Box	Number	Shaded	Letter
1	3562	Yes	G
2	5959	No	
3	5696	No	
4	6276	No	
5	8328	No	
6	6318	No	
7	7770	No	
8	8515	No	
9	5959	No	
10	3562	Yes	G
11	8709	No	
12	6173	No	
13	8001	No	
14	5696	No	
15	4850	No	
16	2250	No	
17	8001	No	
18	3591	No	
19	1634	No	
20	8515	No	
21	1634	No	
22	1634	No	
23	5344	No	
24	8509	No	
25	3562	Yes	G
26	5696	No	
27	6173	No	
28	5344	No	
29	6276	No	
30	6590	No	

$5850 - 2288 = \boxed{} \rightarrow \mathbf{G}$

$$9286 - 3010 = \boxed{} \rightarrow \boxed{\text{R}}$$

4984 - 134 = → **C**

$9646 - 1876 = \boxed{} \rightarrow \mathbf{F}$

$$8856 - 2897 = \boxed{} \rightarrow \boxed{\text{U}}$$

$9631 - 1303 = \boxed{} \rightarrow \mathbf{D}$

$$9458 - 749 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$4774 - 1183 = \boxed{} \rightarrow \boxed{\mathbf{Y}}$$

$9082 - 3738 = \boxed{} \rightarrow \boxed{}$

7666 - 1493 = → **T**

$8589 - 74 = \boxed{} \rightarrow \boxed{0}$

$$4304 - 2054 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$8794 - 285 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$11550 - 3549 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$8844 - 2254 = \boxed{} \rightarrow \boxed{\text{E}}$$

$8059 - 2363 = \boxed{} \rightarrow \boxed{\text{A}}$

$3247 - 1613 = \boxed{} \rightarrow \boxed{\text{P}}$

$10441 - 4123 = \boxed{} \rightarrow \boxed{\text{S}}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

Spilled paint chips were stuck on the fence in equal rows, so multiply the rows to match the bandit's truck color.

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

B																	
72	10	32	5	63	80	77	144	18	15	80	24	10	5	21	18	1	144
18	121	5	21	5	144	50	5										

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

$8 \times 10 = \square \rightarrow \text{A}$

$8 \times 4 = \square \rightarrow \text{U}$

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

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

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

$5 \times 2 = \square \rightarrow \text{L}$

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

$7 \times 11 = \square \rightarrow \text{I}$

$9 \times 2 = \square \rightarrow \text{T}$

$8 \times 3 = \square \rightarrow \text{S}$

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

$9 \times 7 = \square \rightarrow \text{P}$

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

$5 \times 3 = \square \rightarrow \text{W}$

Scratch space:

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

The crew split the leftover tire tracks into equal groups across the lot, so divide them to lock in the bandit's signature move.

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:

$12 \div 3 = \boxed{}$

$72 \div 6 = \boxed{}$

$40 \div 8 = \boxed{}$

$66 \div 11 = \boxed{}$

$12 \div 4 = \boxed{}$

$45 \div 5 = \boxed{}$

$110 \div 10 = \boxed{}$

$70 \div 7 = \boxed{}$

$7 \div 1 = \boxed{}$

$9 \div 9 = \boxed{}$

$12 \div 6 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain rides up on two big wheels, then shreds the spare tires.
2. The villain rolls over the parked cars, then shreds the spare tires.
3. The villain rolls over the parked cars, then blows a cloud of smoke.
4. The villain churns through the mud pit, then blows a cloud of smoke.
5. The villain rolls over the parked cars, then blasts away on nitro.
6. The villain rolls over the parked cars, then stacks a hidden ramp.
7. The villain spins wild donuts in the dirt, then stacks a hidden ramp.
8. The villain rides up on two big wheels, then blows a cloud of smoke.
9. The villain rides up on two big wheels, then blasts away on nitro.
10. The villain soars off the dirt ramp, then roars the engine loud.
11. The villain soars off the dirt ramp, then stacks a hidden ramp.
12. The villain spins wild donuts in the dirt, then blasts away on nitro.

Answer Key

Case of the Demolition Derby Bandit

Culprit: Mabel Mudslinger

Wheelie Walker · Smoke Screen · boy driver · blue · flat tires

Trail: Start 21 → Clue 1 17 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN CANNOT SHRED TIRES"

Round 473 to the nearest ten = 470 (T) · Round 47,480 to the nearest thousand = 47000 (R) · Round 47,959 to the nearest ten thousand = 50000 (S) · Round 3,478 to the nearest thousand = 3000 (A) · Round 282 to the nearest ten = 280 (V) · Round 225 to the nearest hundred = 200 (E) · Round 7,172 to the nearest thousand = 7000 (N) · Round 27,750 to the nearest thousand = 28000 (D) · Round 3,133 to the nearest hundred = 3100 (I) · Round 66 to the nearest ten = 70 (L) · Round 19,922 to the nearest ten thousand = 20000 (O) · Round 326,878 to the nearest hundred thousand = 300000 (C) · Round 24 to the nearest ten = 20 (H)

Clue 2 (Addition): "A WITNESS SAW A BOY GRIP THE WHEEL"

$1131 + 1506 = 2637$ (A) · $2806 + 5452 = 8258$ (T) · $3415 + 5200 = 8615$ (N) · $3127 + 2719 = 5846$ (I) · $3442 + 3563 = 7005$ (S) · $4209 + 3864 = 8073$ (O) · $3832 + 3949 = 7781$ (H) · $1516 + 1547 = 3063$ (E) · $2501 + 2830 = 5331$ (Y) · $4110 + 3500 = 7610$ (B) · $1082 + 1649 = 2731$ (G) · $2230 + 2477 = 4707$ (L) · $1560 + 3306 = 4866$ (W) · $1881 + 2811 = 4692$ (R) · $3739 + 4031 = 7770$ (P)

Clue 3 (Subtraction): "GUARDS FOUGHT BACK BY POPPING A TIRE"

$5850 - 2288 = 3562$ (G) · $9286 - 3010 = 6276$ (R) · $4984 - 134 = 4850$ (C) · $9646 - 1876 = 7770$ (F) · $8856 - 2897 = 5959$ (U) · $9631 - 1303 = 8328$ (D) · $9458 - 749 = 8709$ (H) · $4774 - 1183 = 3591$ (Y) · $9082 - 3738 = 5344$ (I) · $7666 - 1493 = 6173$ (T) · $8589 - 74 = 8515$ (O) · $4304 - 2054 = 2250$ (K) · $8794 - 285 = 8509$ (N) · $11550 - 3549 = 8001$ (B) · $8844 - 2254 = 6590$ (E) · $8059 - 2363 = 5696$ (A) · $3247 - 1613 = 1634$ (P) · $10441 - 4123 = 6318$ (S)

Clue 4 (Multiplication facts (1-12)): "BLUE PAINT WAS LEFT ON THE FENCE"

$8 \times 9 = 72$ (B) · $8 \times 10 = 80$ (A) · $8 \times 4 = 32$ (U) · $5 \times 10 = 50$ (C) · $7 \times 3 = 21$ (F) · $5 \times 1 = 5$ (E) · $5 \times 2 = 10$ (L) · $1 \times 1 = 1$ (O) · $7 \times 11 = 77$ (I) · $9 \times 2 = 18$ (T) · $8 \times 3 = 24$ (S) · $12 \times 12 = 144$ (N) · $9 \times 7 = 63$ (P) · $11 \times 11 = 121$ (H) · $5 \times 3 = 15$ (W)

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

$12 \div 3 = 4$ · $72 \div 6 = 12$ · $40 \div 8 = 5$ · $66 \div 11 = 6$ · $12 \div 4 = 3$ · $45 \div 5 = 9$ · $110 \div 10 = 11$ · $70 \div 7 = 10$ · $7 \div 1 = 7$ · $9 \div 9 = 1$ · $12 \div 6 = 2$