

The Great Garage Mystery

Grade 1 math · Addition, Subtraction, Skip counting, Place value, Missing addends · Reading level grades 1-2

Detective: _____ Date: _____

A sneaky rogue racer took the Golden Wrench. The Head Mechanic needs your help. Look at the tracks, count the gears, and find the speedy suspect.

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 racer is _____

Possible suspects

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

NAME	ENGINE TYPE	SPOILER STYLE	STEERING GRIP	HELMET COLOR	TRACK HAZARD
Dale	Electric Hum	Ducktail Fin	Right Hand Grip	Green Helmet	Sticky Tar
Mario	V8 Roar	Wing Spoiler	Left Hand Grip	Blue Helmet	Slippery Oil
Ayrton	Electric Hum	Active Wing	Left Hand Grip	Green Helmet	Sharp Rocks
Lightning	Super Charger	No Spoiler	Left Hand Grip	Red Helmet	Sharp Rocks
Sally	Super Charger	Wing Spoiler	Right Hand Grip	Green Helmet	Sharp Rocks
Sebastian	V8 Roar	Active Wing	Left Hand Grip	Red Helmet	Sticky Tar
Rusty	Turbo Whistle	No Spoiler	Left Hand Grip	Blue Helmet	Sharp Rocks
Shelby	Turbo Whistle	Carbon Lip	Right Hand Grip	Red Helmet	Sticky Tar
Bubba	Eco Purr	Active Wing	Right Hand Grip	Green Helmet	Sharp Rocks
Alain	Turbo Whistle	Carbon Lip	Left Hand Grip	Blue Helmet	Sticky Tar
Dan	Electric Hum	Active Wing	Right Hand Grip	Red Helmet	Slippery Oil
Max	Turbo Whistle	Ducktail Fin	Right Hand Grip	Blue Helmet	Sharp Rocks
Bobby	Super Charger	Active Wing	Left Hand Grip	Green Helmet	Slippery Oil
Danica	Electric Hum	Carbon Lip	Left Hand Grip	Red Helmet	Sticky Tar
Cruz	Electric Hum	Active Wing	Left Hand Grip	Blue Helmet	Sharp Rocks
Carlos	Turbo Whistle	No Spoiler	Left Hand Grip	Green Helmet	Sticky Tar
Jimmie	Eco Purr	No Spoiler	Left Hand Grip	Green Helmet	Sharp Rocks
Richard	Turbo Whistle	Ducktail Fin	Left Hand Grip	Blue Helmet	Sharp Rocks
Lewis	Turbo Whistle	Carbon Lip	Left Hand Grip	Blue Helmet	Sharp Rocks
Jeff	Super Charger	Carbon Lip	Right Hand Grip	Red Helmet	Sharp Rocks
Lando	Super Charger	Wing Spoiler	Left Hand Grip	Blue Helmet	Sharp Rocks

CLUE 1 Addition

The pit crew counts the spare tires. We add the front tires and back tires. This total tells us which garage to check.

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

T 15 10 4	6 3 8 4 6	13 14 12 4 4 12	10 3 20 3
20 18 9 13 7 4 6			

$5 + 10 = \square \rightarrow \boxed{\text{T}}$

$6 + 3 = \square \rightarrow \boxed{\text{O}}$

$10 + 8 = \square \rightarrow \boxed{\text{P}}$

$3 + 4 = \square \rightarrow \boxed{\text{L}}$

$5 + 5 = \square \rightarrow \boxed{\text{H}}$

$1 + 5 = \square \rightarrow \boxed{\text{R}}$

$2 + 2 = \square \rightarrow \boxed{\text{E}}$

$14 + 6 = \square \rightarrow \boxed{\text{S}}$

$7 + 7 = \square \rightarrow \boxed{\text{N}}$

$4 + 4 = \square \rightarrow \boxed{\text{C}}$

$2 + 1 = \square \rightarrow \boxed{\text{A}}$

$3 + 9 = \square \rightarrow \boxed{\text{D}}$

$3 + 10 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

CLUE 2 Subtraction

We had ten cans of fuel. Now we have fewer. We subtract the used cans to find how much fuel the runaway car took.

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

T				T														
4	6	8	18	4	8	8	12	2	19	15	14	6	8	8	3	6	5	13

							T											
1	19	3	11	3	8	9	4	6	5	19	13	16	5	12	10	18		

$5 - 1 = \square \rightarrow \boxed{\text{T}}$

$12 - 3 = \square \rightarrow \boxed{\text{F}}$

$11 - 3 = \square \rightarrow \boxed{\text{E}}$

$16 - 3 = \square \rightarrow \boxed{\text{D}}$

$17 - 6 = \square \rightarrow \boxed{\text{Y}}$

$19 - 7 = \square \rightarrow \boxed{\text{R}}$

$5 - 4 = \square \rightarrow \boxed{\text{O}}$

$18 - 8 = \square \rightarrow \boxed{\text{K}}$

$17 - 3 = \square \rightarrow \boxed{\text{W}}$

$7 - 5 = \square \rightarrow \boxed{\text{I}}$

$6 - 1 = \square \rightarrow \boxed{\text{A}}$

$20 - 2 = \square \rightarrow \boxed{\text{S}}$

$20 - 1 = \square \rightarrow \boxed{\text{N}}$

$14 - 8 = \square \rightarrow \boxed{\text{H}}$

$7 - 4 = \square \rightarrow \boxed{\text{L}}$

$19 - 3 = \square \rightarrow \boxed{\text{M}}$

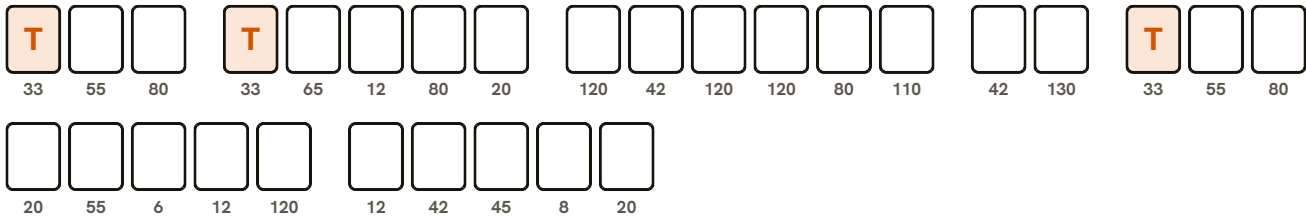
$18 - 3 = \square \rightarrow \boxed{\text{G}}$

Scratch space:

CLUE 3 Skip counting

Let us count the cones on the track. We count them by twos. This skip counting shows us where the car skidded.

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



Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 → **T**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 → **P**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 → **Y**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 → **N**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 → **E**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **O**

Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 → **S**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 → **D**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 → **C**

Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 → **A**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 → **H**

Skip-count by 3s. Fill the blank: 3, 6, 9, __, 15, 18 → **R**

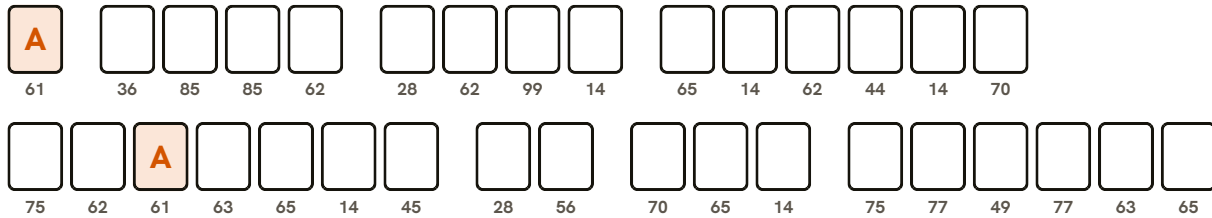
Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 → **K**

Scratch space:

CLUE 4 Place value

Look at the giant scoreboard. It has tens and ones. The place value numbers show the lap time of our suspect.

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



What number has 6 tens and 1 one?

→

A

What number has 1 ten and 4 ones?

→

E

What number has 8 tens and 5 ones?

→

O

What number has 4 tens and 4 ones?

→

M

What number has 4 tens and 5 ones?

→

D

What number has 6 tens and 2 ones?

→

L

What number has 3 tens and 6 ones?

→

C

What number has 5 tens and 6 ones?

→

Y

What number has 9 tens and 9 ones?

→

U

What number has 4 tens and 9 ones?

→

N

What number has 6 tens and 3 ones?

→

S

What number has 7 tens and 0 ones?

→

T

What number has 6 tens and 5 ones?

→

H

What number has 2 tens and 8 ones?

→

B

What number has 7 tens and 7 ones?

→

I

What number has 7 tens and 5 ones?

→

F

Scratch space:

CLUE 5**Missing addends - the last clue**

We need eight heavy metal bolts to fix the gate. We only have five. Finding the missing number opens the door.

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:

$7 + \underline{\quad} = 13$

$1 + \underline{\quad} = 9$

$5 + \underline{\quad} = 17$

$10 + \underline{\quad} = 15$

$7 + \underline{\quad} = 9$

$4 + \underline{\quad} = 14$

$7 + \underline{\quad} = 14$

$7 + \underline{\quad} = 18$

$9 + \underline{\quad} = 12$

$2 + \underline{\quad} = 11$

$2 + \underline{\quad} = 6$

Step 2 - cross out the sentence with each answer:

1. The villain revved a loud engine, then grabbed the master key to the garage.
2. The villain sped through the pit lane, then hid the winner trophy.
3. The villain revved a loud engine, then stole the shiny golden wrench.
4. The villain zoomed past the checkered flag, then grabbed the master key to the garage.
5. The villain zoomed past the checkered flag, then carried away the special fuel can.
6. The villain sped through the pit lane, then stole the shiny golden wrench.
7. The villain drifts across the starting line, then stole the shiny golden wrench.
8. The villain skidded around the hairpin turn, then hid the winner trophy.
9. The villain drifts across the starting line, then grabbed the master key to the garage.
10. The villain sped through the pit lane, then grabbed the master key to the garage.
11. The villain zoomed past the checkered flag, then stole the shiny golden wrench.
12. The villain skidded around the hairpin turn, then took the secret map of the track.

Answer Key

The Great Garage Mystery

Culprit: Cruz

Electric Hum · Active Wing · Left Hand Grip · Blue Helmet · Sharp Rocks

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE RACER INDEED HAS A SPOILER"

$5 + 10 = 15$ (T) · $6 + 3 = 9$ (O) · $10 + 8 = 18$ (P) · $3 + 4 = 7$ (L) · $5 + 5 = 10$ (H) · $1 + 5 = 6$ (R) · $2 + 2 = 4$ (E) · $14 + 6 = 20$ (S) · $7 + 7 = 14$ (N) · $4 + 4 = 8$ (C) · $2 + 1 = 3$ (A) · $3 + 9 = 12$ (D) · $3 + 10 = 13$ (I)

Clue 2 (Subtraction): "THE STEERING WHEEL HAD ONLY LEFT HAND MARKS"

$5 - 1 = 4$ (T) · $12 - 3 = 9$ (F) · $11 - 3 = 8$ (E) · $16 - 3 = 13$ (D) · $17 - 6 = 11$ (Y) · $19 - 7 = 12$ (R) · $5 - 4 = 1$ (O) · $18 - 8 = 10$ (K) · $17 - 3 = 14$ (W) · $7 - 5 = 2$ (I) · $6 - 1 = 5$ (A) · $20 - 2 = 18$ (S) · $20 - 1 = 19$ (N) · $14 - 8 = 6$ (H) · $7 - 4 = 3$ (L) · $19 - 3 = 16$ (M) · $18 - 3 = 15$ (G)

Clue 3 (Skip counting): "THE TYRES POPPED ON THE SHARP ROCKS"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (T) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 130, 140 = 120 (P) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (Y) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 = 130 (N) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (O) · Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 = 20 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (D) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (C) · Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 = 6 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, __, 15, 18 = 12 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (K)

Clue 4 (Place value): "A COOL BLUE HELMET FLASHED BY THE FINISH"

What number has 6 tens and 1 one? = 61 (A) · What number has 1 ten and 4 ones? = 14 (E) · What number has 8 tens and 5 ones? = 85 (O) · What number has 4 tens and 4 ones? = 44 (M) · What number has 4 tens and 5 ones? = 45 (D) · What number has 6 tens and 2 ones? = 62 (L) · What number has 3 tens and 6 ones? = 36 (C) · What number has 5 tens and 6 ones? = 56 (Y) · What number has 9 tens and 9 ones? = 99 (U) · What number has 4 tens and 9 ones? = 49 (N) · What number has 6 tens and 3 ones? = 63 (S) · What number has 7 tens and 0 ones? = 70 (T) · What number has 6 tens and 5 ones? = 65 (H) · What number has 2 tens and 8 ones? = 28 (B) · What number has 7 tens and 7 ones? = 77 (I) · What number has 7 tens and 5 ones? = 75 (F)

Clue 5 (Missing addends): surviving statement is box 1 → Cruz

$7 + \underline{\quad} = 13 = 6$ · $1 + \underline{\quad} = 9 = 8$ · $5 + \underline{\quad} = 17 = 12$ · $10 + \underline{\quad} = 15 = 5$ · $7 + \underline{\quad} = 9 = 2$ · $4 + \underline{\quad} = 14 = 10$ · $7 + \underline{\quad} = 14 = 7$ · $7 + \underline{\quad} = 18 = 11$ · $9 + \underline{\quad} = 12 = 3$ · $2 + \underline{\quad} = 11 = 9$ · $2 + \underline{\quad} = 6 = 4$