



The Great Kid Oil Robbery

Grade 5 math · Subtraction, Addition, Place value, Fractions of a number · Reading level grades 5-6

Detective: _____ **Date:** _____

Chief Joshua Dax Zeno blew his whistle! Someone broke into the central vaults of Slick City and stole the super-slick Kid Oil, the famous formula that keeps the kids' go-karts racing faster than lightning. We need to track down the slickest oil bandit in town before the big championship race 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 oil bandit is _____

Possible suspects

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

NAME	RACING ENGINE	SECRET GADGET	RACING GOGGLES	HAIR STYLE	FOIL WEAPON
Speedy Sam	Slick Oil Sprayer	Sticky Goop Launcher	Wears Blue Racing Goggles	Spiky Green Mohawks	Allergic to Bubblegum
Oily Oliver	Super Turbo Engine	Deployable Spike Strips	Wears Red Racing Goggles	Bright Orange Braids	Slippery on Banana Peels
Piston Pete	Super Turbo Engine	High-Speed Grapple Hook	Wears Blue Racing Goggles	Bright Orange Braids	Allergic to Bubblegum
Turbo Tina	Heavy Cargo Crane	High-Speed Grapple Hook	Wears Red Racing Goggles	Neon Blue Spikes	Slippery on Banana Peels
Nitro Ned	Glider Flight Wings	Sticky Goop Launcher	Wears Blue Racing Goggles	Neon Blue Spikes	Allergic to Bubblegum
Racer Rachel	Heavy Cargo Crane	Sonic Siren Jammer	Wears Red Racing Goggles	Neon Blue Spikes	Slippery on Banana Peels
Spike Spencer	Super Turbo Engine	Sticky Goop Launcher	Wears Red Racing Goggles	Neon Blue Spikes	Slippery on Banana Peels
Ignition Iris	Magnetic Tow Hook	Glow-in-the-Dark Headlights	Wears Red Racing Goggles	Neon Blue Spikes	Slippery on Banana Peels
Axle Abby	Slick Oil Sprayer	Glow-in-the-Dark Headlights	Wears Red Racing Goggles	Neon Blue Spikes	Slippery on Banana Peels
Fuel Mary	Slick Oil Sprayer	High-Speed Grapple Hook	Wears Blue Racing Goggles	Bright Orange Braids	Scared of Cute Puppies
Gasket Gail	Magnetic Tow Hook	Sonic Siren Jammer	Wears Blue Racing Goggles	Neon Blue Spikes	Slippery on Banana Peels
Bumper Bob	Slick Oil Sprayer	Sonic Siren Jammer	Wears Red Racing Goggles	Bright Orange Braids	Allergic to Bubblegum
Greasy Greg	Glider Flight Wings	Deployable Spike Strips	Wears Red Racing Goggles	Bright Orange Braids	Allergic to Bubblegum
Drift Diane	Heavy Cargo Crane	High-Speed Grapple Hook	Wears Red Racing Goggles	Neon Blue Spikes	Allergic to Bubblegum
Skidmark Sean	Heavy Cargo Crane	Sticky Goop Launcher	Wears Blue Racing Goggles	Bright Orange Braids	Allergic to Bubblegum
Wrenchy Will	Slick Oil Sprayer	Sticky Goop Launcher	Wears Red Racing Goggles	Neon Blue Spikes	Slippery on Banana Peels
Crankcase Chris	Super Turbo Engine	Sticky Goop Launcher	Wears Blue Racing Goggles	Neon Blue Spikes	Scared of Cute Puppies
Exhaust Elsa	Slick Oil Sprayer	Sonic Siren Jammer	Wears Red Racing Goggles	Bright Orange Braids	Slippery on Banana Peels
Slick Sally	Slick Oil Sprayer	High-Speed Grapple Hook	Wears Blue Racing Goggles	Neon Blue Spikes	Scared of Cute Puppies
Revving Roy	Glider Flight Wings	Deployable Spike Strips	Wears Blue Racing Goggles	Spiky Green Mohawks	Allergic to Bubblegum
Chassis Charlie	Slick Oil Sprayer	High-Speed Grapple Hook	Wears Blue Racing Goggles	Neon Blue Spikes	Allergic to Bubblegum

CLUE 1 Subtraction

Chief Joshua Dax Zeno inspects the main warehouse. We had a huge inventory of oil barrels, but several are now missing. If we subtract the remaining count from the original stock, we can determine the first clue.

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

T 3492	4667	8656	T 3492	4667	3639	8656	5534	7494	8921	8656	5051	6340	8921	T 3492	4575	5051	8656
T 3492	4667	8656	6917	8921	8921	1241	4574	7308	4575	6340	6682	4667	8656	6964			

$6996 - 3504 = \square \rightarrow \text{T}$	$10240 - 3900 = \square \rightarrow \text{N}$	$5337 - 4096 = \square \rightarrow \text{P}$
$5706 - 1132 = \square \rightarrow \text{L}$	$8621 - 3570 = \square \rightarrow \text{S}$	$4622 - 47 = \square \rightarrow \text{U}$
$6553 - 2914 = \square \rightarrow \text{I}$	$7070 - 106 = \square \rightarrow \text{R}$	$11178 - 3684 = \square \rightarrow \text{D}$
$8995 - 3461 = \square \rightarrow \text{F}$	$11724 - 4416 = \square \rightarrow \text{A}$	$10077 - 1421 = \square \rightarrow \text{E}$
$7294 - 612 = \square \rightarrow \text{C}$	$11462 - 2541 = \square \rightarrow \text{O}$	$6257 - 1590 = \square \rightarrow \text{H}$
$10950 - 4033 = \square \rightarrow \text{G}$		

Scratch space:

CLUE 2 Addition

Our patrol officers are gathering stray oil cans dropped along the highway escape route. We need to add up the cans found on the grass and the pavement to unlock this clue.

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

R													R	
4361	9803	6237	4634	6020	4634	4634	5027	9803	7242	6516	9803	4361	9803	

7242	2904	6020	2704	2704	9803	6237	8053	2704	2704	5669	9803	5669	9803	6484

3032 + 1329 = → R	1776 + 2858 = → G	1193 + 1711 = → P
4105 + 5698 = → E	3727 + 2293 = → O	2740 + 2929 = → H
1656 + 3371 = → L	3991 + 4062 = → A	3828 + 3414 = → S
4374 + 2110 = → I	3665 + 2572 = → D	1664 + 1040 = → T
3014 + 3502 = → W		

Scratch space:

CLUE 3 Place value

The bandit locked the vault keypad with a digital code. The display screen is glitching and only showing a massive number. We must use place value to find the correct digit to reveal our next clue.

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

T																		
7000	3000	700	2000	600	30	30	6000	600	4000	8000	30	600	20	20	700	400	200	4000

6000	70	6000	4000	6000	4000	6000	20	700	700	30

What is the value of the 7 in 67,054? → **T**

What is the value of the 3 in 286,630? → **L**

What is the value of the 4 in 774,821? → **N**

What is the value of the 8 in 638,263? → **S**

What is the value of the 4 in 97,421? → **D**

What is the value of the 3 in 53,962? → **H**

What is the value of the 2 in 48,268? → **O**

What is the value of the 2 in 62,301? → **V**

What is the value of the 6 in 184,618? → **I**

What is the value of the 6 in 286,418? → **A**

What is the value of the 2 in 44,728? → **P**

What is the value of the 7 in 22,792? → **E**

What is the value of the 7 in 38,274? → **B**

Scratch space:

CLUE 4
Fractions of a number

A witness saw the bandit load some loot onto a getaway truck. The truck could only carry a small fraction of the heavy cargo. Let us calculate that fraction of the total weight to narrow down our suspects.

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

N			N														
39	40	28	39	17	26	18	40	29	10	23	11	22	24	2	23	27	
			N														
37	26	18	39	14	4	28	4	24	40	14	40	2	27	29			

$1/3 \text{ of } 117 = \square \rightarrow \text{N}$

$2/6 \text{ of } 111 = \square \rightarrow \text{C}$

$2/4 \text{ of } 44 = \square \rightarrow \text{Y}$

$2/10 \text{ of } 10 = \square \rightarrow \text{A}$

$1/6 \text{ of } 108 = \square \rightarrow \text{U}$

$8/10 \text{ of } 30 = \square \rightarrow \text{H}$

$4/8 \text{ of } 58 = \square \rightarrow \text{S}$

$1/4 \text{ of } 160 = \square \rightarrow \text{E}$

$3/4 \text{ of } 36 = \square \rightarrow \text{R}$

$5/10 \text{ of } 52 = \square \rightarrow \text{L}$

$2/4 \text{ of } 22 = \square \rightarrow \text{K}$

$1/8 \text{ of } 112 = \square \rightarrow \text{G}$

$1/6 \text{ of } 102 = \square \rightarrow \text{B}$

$2/10 \text{ of } 20 = \square \rightarrow \text{T}$

$2/3 \text{ of } 15 = \square \rightarrow \text{P}$

$2/6 \text{ of } 84 = \square \rightarrow \text{O}$

$2/8 \text{ of } 92 = \square \rightarrow \text{I}$

Scratch space:

CLUE 5**Fractions of a number - the last clue**

The bandit vehicle is leaking fuel as they speed away. Chief Joshua Dax Zeno estimates they have used a fraction of their gas tank. Finding that fraction of the tank capacity will help us locate the thief.

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:

$1/6 \text{ of } 72 = \boxed{}$

$1/4 \text{ of } 20 = \boxed{}$

$1/8 \text{ of } 16 = \boxed{}$

$1/5 \text{ of } 20 = \boxed{}$

$5/10 \text{ of } 20 = \boxed{}$

$1/8 \text{ of } 64 = \boxed{}$

$1/8 \text{ of } 24 = \boxed{}$

$2/6 \text{ of } 18 = \boxed{}$

$7/8 \text{ of } 8 = \boxed{}$

$2/4 \text{ of } 18 = \boxed{}$

$1/8 \text{ of } 88 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swung a magnetic tow hook, then turned on glow-in-the-dark headlights.
2. The villain hoisted a heavy cargo crane, then shot a high-speed grapple hook.
3. The villain revved up a super turbo engine, then scattered deployable spike strips.
4. The villain unleashed glider flight wings, then blasted a sonic siren jammer.
5. The villain hoisted a heavy cargo crane, then blasted a sonic siren jammer.
6. The villain sprayed slick oil everywhere, then fired a sticky goop launcher.
7. The villain revved up a super turbo engine, then fired a sticky goop launcher.
8. The villain swung a magnetic tow hook, then fired a sticky goop launcher.
9. The villain sprayed slick oil everywhere, then blasted a sonic siren jammer.
10. The villain revved up a super turbo engine, then shot a high-speed grapple hook.
11. The villain sprayed slick oil everywhere, then scattered deployable spike strips.
12. The villain sprayed slick oil everywhere, then turned on glow-in-the-dark headlights.

Answer Key

The Great Kid Oil Robbery

Culprit: Ignition Iris

Magnetic Tow Hook · Glow-in-the-Dark Headlights · Wears Red Racing Goggles · Neon Blue Spikes · Slippery on Banana Peels

Trail: Start 21 → Clue 1 15 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Subtraction): "THE THIEF DOES NOT USE THE GOOP LAUNCHER"

$6996 - 3504 = 3492$ (T) · $10240 - 3900 = 6340$ (N) · $5337 - 4096 = 1241$ (P) · $5706 - 1132 = 4574$ (L) · $8621 - 3570 = 5051$ (S) · $4622 - 47 = 4575$ (U) · $6553 - 2914 = 3639$ (I) · $7070 - 106 = 6964$ (R) · $11178 - 3684 = 7494$ (D) · $8995 - 3461 = 5534$ (F) · $11724 - 4416 = 7308$ (A) · $10077 - 1421 = 8656$ (E) · $7294 - 612 = 6682$ (C) · $11462 - 2541 = 8921$ (O) · $6257 - 1590 = 4667$ (H) · $10950 - 4033 = 6917$ (G)

Clue 2 (Addition): "RED GOGGLES WERE SPOTTED AT THE HEIST"

$3032 + 1329 = 4361$ (R) · $1776 + 2858 = 4634$ (G) · $1193 + 1711 = 2904$ (P) · $4105 + 5698 = 9803$ (E) · $3727 + 2293 = 6020$ (O) · $2740 + 2929 = 5669$ (H) · $1656 + 3371 = 5027$ (L) · $3991 + 4062 = 8053$ (A) · $3828 + 3414 = 7242$ (S) · $4374 + 2110 = 6484$ (I) · $3665 + 2572 = 6237$ (D) · $1664 + 1040 = 2704$ (T) · $3014 + 3502 = 6516$ (W)

Clue 3 (Place value): "THE VILLAIN SLIPPED ON A BANANA PEEL"

What is the value of the 7 in 67,054? = 7000 (T) · What is the value of the 3 in 286,630? = 30 (L) · What is the value of the 4 in 774,821? = 4000 (N) · What is the value of the 8 in 638,263? = 8000 (S) · What is the value of the 4 in 97,421? = 400 (D) · What is the value of the 3 in 53,962? = 3000 (H) · What is the value of the 2 in 48,268? = 200 (O) · What is the value of the 2 in 62,301? = 2000 (V) · What is the value of the 6 in 184,618? = 600 (I) · What is the value of the 6 in 286,418? = 6000 (A) · What is the value of the 2 in 44,728? = 20 (P) · What is the value of the 7 in 22,792? = 700 (E) · What is the value of the 7 in 38,274? = 70 (B)

Clue 4 (Fractions of a number): "NEON BLUE SPIKY HAIR CLUNG TO THE GEARS"

$\frac{1}{3}$ of 117 = 39 (N) · $\frac{2}{6}$ of 111 = 37 (C) · $\frac{2}{4}$ of 44 = 22 (Y) · $\frac{2}{10}$ of 10 = 2 (A) · $\frac{1}{6}$ of 108 = 18 (U) · $\frac{8}{10}$ of 30 = 24 (H) · $\frac{4}{8}$ of 58 = 29 (S) · $\frac{1}{4}$ of 160 = 40 (E) · $\frac{3}{4}$ of 36 = 27 (R) · $\frac{5}{10}$ of 52 = 26 (L) · $\frac{2}{4}$ of 22 = 11 (K) · $\frac{1}{8}$ of 112 = 14 (G) · $\frac{1}{6}$ of 102 = 17 (B) · $\frac{2}{10}$ of 20 = 4 (T) · $\frac{2}{3}$ of 15 = 10 (P) · $\frac{2}{6}$ of 84 = 28 (O) · $\frac{2}{8}$ of 92 = 23 (I)

Clue 5 (Fractions of a number): surviving statement is box 1 → Ignition Iris

$\frac{1}{6}$ of 72 = 12 · $\frac{1}{4}$ of 20 = 5 · $\frac{1}{8}$ of 16 = 2 · $\frac{1}{5}$ of 20 = 4 · $\frac{5}{10}$ of 20 = 10 · $\frac{1}{8}$ of 64 = 8 · $\frac{1}{8}$ of 24 = 3 · $\frac{2}{6}$ of 18 = 6 · $\frac{7}{8}$ of 8 = 7 · $\frac{2}{4}$ of 18 = 9 · $\frac{1}{8}$ of 88 = 11