



Case of the Comet Crook

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

Detective: _____ **Date:** _____

Commander Vega vanished from Orbit-9 during the night shift, and the only clue left behind was a trail of glittering comet dust. The station's robot helper, Bolt, beeped you awake and handed you a flashlight. Twenty-four crew members are aboard, but only one is the Comet Crook.

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 Comet Crook is _____

Possible suspects

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

NAME	SHIP CLASS	SPACE GADGET	PILOT TYPE	SUIT COLOR	WEAKNESS
Finn Solar	Star Cruiser	gravity boots	girl	red suit	freezing cold
Pilot Orion	Solar Sailer	gravity boots	girl	green suit	loud alarms
Pia Atlas	Star Cruiser	gravity boots	girl	green suit	bright flashlights
Theo Rigel	Rocket Glider	warp jump	boy	blue suit	loud alarms
Captain Nova	Moon Hopper	warp jump	boy	red suit	bright flashlights
Jax Ceres	Moon Hopper	tractor beam	girl	green suit	loud alarms
Luna Park	Star Cruiser	laser drill	boy	green suit	loud alarms
Mara Skye	Rocket Glider	gravity boots	boy	green suit	bright flashlights
Leo Pluto	Solar Sailer	laser drill	boy	blue suit	bright flashlights
Milo Ray	Moon Hopper	gravity boots	boy	green suit	loud alarms
Comet Joe	Star Cruiser	laser drill	girl	green suit	bright flashlights
Nia Lyra	Moon Hopper	warp jump	girl	blue suit	freezing cold
Iris Star	Rocket Glider	cloaking field	girl	green suit	loud alarms
Max Phobos	Asteroid Digger	tractor beam	girl	blue suit	loud alarms
Dash Cosmo	Moon Hopper	laser drill	boy	blue suit	freezing cold
Tess Aero	Moon Hopper	warp jump	girl	green suit	loud alarms
Vela Moon	Star Cruiser	gravity boots	girl	blue suit	bright flashlights
Rex Quasar	Moon Hopper	cloaking field	girl	red suit	bright flashlights
Astro Pete	Star Cruiser	warp jump	girl	green suit	freezing cold
Gia Meteor	Asteroid Digger	laser drill	boy	green suit	loud alarms
Zara Flux	Star Cruiser	tractor beam	girl	green suit	loud alarms

CLUE 1

Bolt's radar only shows numbers rounded to the nearest ten, so you round the dust readings to learn the crook's gadget could not be a cloaking field.

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

31000 500000 4700 3100000 28000 700000 700000 300000 28000 70000 140 300000 70000 70000 14000 31000 140000 300 4700

300000 140 700000 14000 300000 30 28000 70000 280000 2800 28000 4700 700000 200000

Round 30,695 to the nearest thousand → **T**

Round 27,865 to the nearest thousand $\rightarrow$

Round 3,082,166 to the nearest hundred thousand → **V**

Round 227,668 to the nearest hundred thousand $\rightarrow$ **D**

Round 692,472 to the nearest hundred thousand $\rightarrow$ **L**

Round 142 to the nearest ten $\rightarrow$ **C**

Round 337 to the nearest hundred $\rightarrow$ **S**

Round 509,941 to the nearest hundred thousand → **H**

Round 144,936 to the nearest ten thousand $\rightarrow$ **U**

Round 14,259 to the nearest thousand $\rightarrow$

Round 279,857 to the nearest ten thousand → **G**

Round 2,825 to the nearest hundred → **F**

Round 4,655 to the nearest hundred → **E**

Round 74,551 to the nearest ten thousand $\rightarrow$ **N**

Round 33 to the nearest ten $\rightarrow$ **K**

Round 286,023 to the nearest hundred thousand



A

Scratch space:

CLUE 2 Addition

You gather the dropped tools and add up the piles to figure out if a boy or girl pilot dashed down the hall.

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

A 3153	7157	9543	5490	8293	6148	3631	3631	3631	A 3153	7157	A 3153	9546	9543	8725	5154
7308	9543	5154	6007	5490	8725	9518	8293	A 3153	7157	A 3153	3444				

$1409 + 1744 = \square \rightarrow \text{A}$

$4475 + 4250 = \square \rightarrow \text{R}$

$1600 + 2031 = \square \rightarrow \text{S}$

$3292 + 2715 = \square \rightarrow \text{O}$

$4173 + 2984 = \square \rightarrow \text{W}$

$5168 + 3125 = \square \rightarrow \text{N}$

$5594 + 3924 = \square \rightarrow \text{U}$

$3618 + 5928 = \square \rightarrow \text{G}$

$2642 + 2512 = \square \rightarrow \text{L}$

$2188 + 1256 = \square \rightarrow \text{Y}$

$4065 + 5478 = \square \rightarrow \text{I}$

$1652 + 3838 = \square \rightarrow \text{T}$

$3749 + 3559 = \square \rightarrow \text{P}$

$2836 + 3312 = \square \rightarrow \text{E}$

Scratch space:

CLUE 3

Subtraction

Some gear is missing from the rack, so you subtract what is left from the full count to see how Vega scared the crook off.

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

V																	
6740	8122	1548	1558	1432	1153	1558	8440	8122	2834	3422	8997	8122	1153	8440	1936	1936	5459
2959	3097	3422	8997	1558	4425	1558	7157	1558	8440	7706							

$7943 - 1203 = \square \rightarrow \boxed{\text{V}}$

$5050 - 2216 = \square \rightarrow \boxed{\text{D}}$

$2493 - 1340 = \square \rightarrow \boxed{\text{C}}$

$2902 - 1354 = \square \rightarrow \boxed{\text{G}}$

$3382 - 423 = \square \rightarrow \boxed{\text{W}}$

$9383 - 2226 = \square \rightarrow \boxed{\text{L}}$

$5254 - 3822 = \square \rightarrow \boxed{\text{S}}$

$3553 - 131 = \square \rightarrow \boxed{\text{T}}$

$9448 - 451 = \square \rightarrow \boxed{\text{H}}$

$5577 - 118 = \square \rightarrow \boxed{\text{K}}$

$7456 - 4359 = \square \rightarrow \boxed{\text{I}}$

$9382 - 1260 = \square \rightarrow \boxed{\text{E}}$

$10442 - 2736 = \square \rightarrow \boxed{\text{M}}$

$9874 - 1434 = \square \rightarrow \boxed{\text{R}}$

$5124 - 699 = \square \rightarrow \boxed{\text{N}}$

$4214 - 2656 = \square \rightarrow \boxed{\text{A}}$

$4041 - 2105 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

Multiplication facts (1-12)

The torn suit patches were stacked in neat rows, so you multiply the rows to match the crook's suit color.

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

A number line from 0 to 100 with increments of 3. The number 30 is highlighted in orange and labeled with a large orange 'A'.

$10 \times 3 = \boxed{} \rightarrow \boxed{\text{A}}$

$4 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$8 \times 5 = \boxed{} \rightarrow \boxed{\text{P}}$

$4 \times 8 = \boxed{} \rightarrow \boxed{\text{I}}$

$$6 \times 7 = \boxed{} \rightarrow \boxed{\text{U}}$$

$10 \times 10 = \boxed{} \rightarrow \boxed{\text{W}}$

$3 \times 11 = \boxed{} \rightarrow \boxed{\text{R}}$

$11 \times 9 = \square \rightarrow \boxed{\text{T}}$

$10 \times 8 = \boxed{} \rightarrow \boxed{\text{N}}$

$6 \times 12 = \boxed{} \rightarrow \boxed{\text{H}}$

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

$12 \times 12 = \boxed{} \rightarrow \boxed{\text{D}}$

$2 \times 9 = \square \rightarrow \boxed{0}$

$9 \times 1 = \boxed{} \rightarrow \boxed{\text{F}}$

$4 \times 6 = \boxed{} \rightarrow \boxed{\text{E}}$

$2 \times 3 = \boxed{} \rightarrow \boxed{\text{L}}$

$$3 \times 5 = \boxed{} \rightarrow \boxed{\text{S}}$$

$5 \times 12 = \boxed{} \rightarrow \boxed{\text{C}}$

Scratch space:

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

Back at base you split the last clues evenly among the docking bays, and the division points straight to the crook's ship class.

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:

$9 \div 3 = \boxed{}$

$99 \div 9 = \boxed{}$

$40 \div 8 = \boxed{}$

$28 \div 7 = \boxed{}$

$110 \div 11 = \boxed{}$

$54 \div 6 = \boxed{}$

$144 \div 12 = \boxed{}$

$6 \div 3 = \boxed{}$

$24 \div 4 = \boxed{}$

$7 \div 1 = \boxed{}$

$3 \div 3 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain zips in on a rocket glider, then cuts the lights with a laser drill.
2. The villain bounces over in a moon hopper, then cuts the lights with a laser drill.
3. The villain drifts in on a solar sailer, then sticks to the ceiling with gravity boots.
4. The villain glides up in a star cruiser, then warp jumps away fast.
5. The villain glides up in a star cruiser, then grabs the door with a tractor beam.
6. The villain drifts in on a solar sailer, then warp jumps away fast.
7. The villain tunnels in with an asteroid digger, then drills through the wall.
8. The villain bounces over in a moon hopper, then grabs the door with a tractor beam.
9. The villain glides up in a star cruiser, then cuts the lights with a laser drill.
10. The villain glides up in a star cruiser, then sticks to the ceiling with gravity boots.
11. The villain bounces over in a moon hopper, then warp jumps away fast.
12. The villain drifts in on a solar sailer, then grabs the door with a tractor beam.

Answer Key

Case of the Comet Crook

Culprit: Jax Ceres

Moon Hopper · tractor beam · girl · green suit · loud alarms

Trail: Start 21 → Clue 1 19 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN CANNOT USE A CLOAKING FIELD"

Round 30,695 to the nearest thousand = 31000 (T) · Round 27,865 to the nearest thousand = 28000 (I) · Round 3,082,166 to the nearest hundred thousand = 3100000 (V) · Round 227,668 to the nearest hundred thousand = 200000 (D) · Round 692,472 to the nearest hundred thousand = 700000 (L) · Round 142 to the nearest ten = 140 (C) · Round 337 to the nearest hundred = 300 (S) · Round 509,941 to the nearest hundred thousand = 500000 (H) · Round 144,936 to the nearest ten thousand = 140000 (U) · Round 14,259 to the nearest thousand = 14000 (O) · Round 279,857 to the nearest ten thousand = 280000 (G) · Round 2,825 to the nearest hundred = 2800 (F) · Round 4,655 to the nearest hundred = 4700 (E) · Round 74,551 to the nearest ten thousand = 70000 (N) · Round 33 to the nearest ten = 30 (K) · Round 286,023 to the nearest hundred thousand = 300000 (A)

Clue 2 (Addition): "A WITNESS SAW A GIRL PILOT RUN AWAY"

$1409 + 1744 = 3153$ (A) · $4475 + 4250 = 8725$ (R) · $1600 + 2031 = 3631$ (S) · $3292 + 2715 = 6007$ (O) · $4173 + 2984 = 7157$ (W) · $5168 + 3125 = 8293$ (N) · $5594 + 3924 = 9518$ (U) · $3618 + 5928 = 9546$ (G) · $2642 + 2512 = 5154$ (L) · $2188 + 1256 = 3444$ (Y) · $4065 + 5478 = 9543$ (I) · $1652 + 3838 = 5490$ (T) · $3749 + 3559 = 7308$ (P) · $2836 + 3312 = 6148$ (E)

Clue 3 (Subtraction): "VEGA SCARED THE CROOK WITH AN ALARM"

$7943 - 1203 = 6740$ (V) · $5050 - 2216 = 2834$ (D) · $2493 - 1340 = 1153$ (C) · $2902 - 1354 = 1548$ (G) · $3382 - 423 = 2959$ (W) · $9383 - 2226 = 7157$ (L) · $5254 - 3822 = 1432$ (S) · $3553 - 131 = 3422$ (T) · $9448 - 451 = 8997$ (H) · $5577 - 118 = 5459$ (K) · $7456 - 4359 = 3097$ (I) · $9382 - 1260 = 8122$ (E) · $10442 - 2736 = 7706$ (M) · $9874 - 1434 = 8440$ (R) · $5124 - 699 = 4425$ (N) · $4214 - 2656 = 1558$ (A) · $4041 - 2105 = 1936$ (O)

Clue 4 (Multiplication facts (1-12)): "A TORN GREEN SUIT PATCH WAS LEFT BEHIND"

$10 \times 3 = 30$ (A) · $4 \times 7 = 28$ (B) · $8 \times 5 = 40$ (P) · $4 \times 8 = 32$ (I) · $6 \times 7 = 42$ (U) · $10 \times 10 = 100$ (W) · $3 \times 11 = 33$ (R) · $11 \times 9 = 99$ (T) · $10 \times 8 = 80$ (N) · $6 \times 12 = 72$ (H) · $9 \times 7 = 63$ (G) · $12 \times 12 = 144$ (D) · $2 \times 9 = 18$ (O) · $9 \times 1 = 9$ (F) · $4 \times 6 = 24$ (E) · $2 \times 3 = 6$ (L) · $3 \times 5 = 15$ (S) · $5 \times 12 = 60$ (C)

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

$9 \div 3 = 3$ · $99 \div 9 = 11$ · $40 \div 8 = 5$ · $28 \div 7 = 4$ · $110 \div 11 = 10$ · $54 \div 6 = 9$ · $144 \div 12 = 12$ · $6 \div 3 = 2$ · $24 \div 4 = 6$ · $7 \div 1 = 7$ · $3 \div 3 = 1$