The Case of the Comet Crook

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

Detective: _____ **Date:** _____

Someone snuck aboard Orbit-9 and grabbed the Station Captain right out of the control room. The alarm bells are still ringing, and twenty-four pilots are docked at the rings. Only one of them is the Comet Crook, and you must find out who.

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 _____

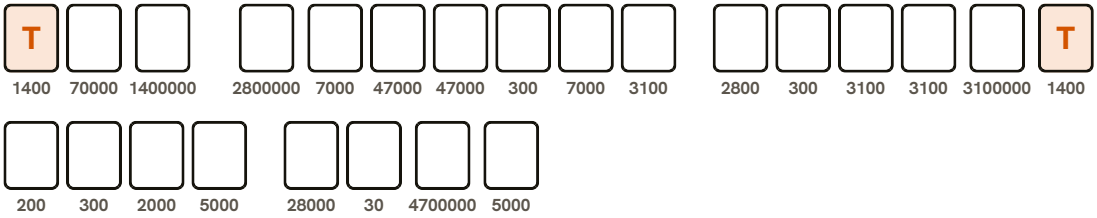
Possible suspects

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

NAME	SHIP CLASS	GADGET	PILOT TYPE	HULL COLOR	WEAKNESS
Indra Voss	Scout Pod	Tractor Beam	human pilot	blue hull	sticky foam
Cosmo Jang	Cargo Hauler	Drone Swarm	robot pilot	silver hull	sticky foam
Ace Tam	Mining Rig	Cloaking Field	human pilot	blue hull	sticky foam
Tess Ray	Rocket Racer	Drone Swarm	human pilot	red hull	bright flashlights
Dash Coro	Rocket Racer	Drone Swarm	robot pilot	silver hull	bright flashlights
Nova Reed	Scout Pod	Cloaking Field	robot pilot	red hull	loud sirens
Juno Sky	Scout Pod	Warp Jump	robot pilot	red hull	loud sirens
Luna Vance	Battle Cruiser	Warp Jump	human pilot	silver hull	loud sirens
Captain Bex	Rocket Racer	Warp Jump	human pilot	blue hull	bright flashlights
Pip Rocket	Cargo Hauler	Cloaking Field	human pilot	blue hull	loud sirens
Rex Orbit	Battle Cruiser	Tractor Beam	robot pilot	blue hull	bright flashlights
Orin Pax	Battle Cruiser	Tractor Beam	human pilot	blue hull	bright flashlights
Mira Belt	Cargo Hauler	Force Shield	human pilot	blue hull	bright flashlights
Milo Star	Mining Rig	Tractor Beam	human pilot	blue hull	bright flashlights
Sol Marko	Battle Cruiser	Force Shield	human pilot	red hull	bright flashlights
Vega Quill	Scout Pod	Drone Swarm	robot pilot	silver hull	bright flashlights
Comet Lee	Mining Rig	Cloaking Field	robot pilot	red hull	sticky foam
Gus Halo	Scout Pod	Force Shield	human pilot	silver hull	bright flashlights
Astro Pim	Cargo Hauler	Drone Swarm	human pilot	blue hull	bright flashlights
Pilot Zara	Scout Pod	Cloaking Field	human pilot	red hull	loud sirens
Riva Dune	Cargo Hauler	Warp Jump	robot pilot	silver hull	sticky foam

CLUE 1 Rounding

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

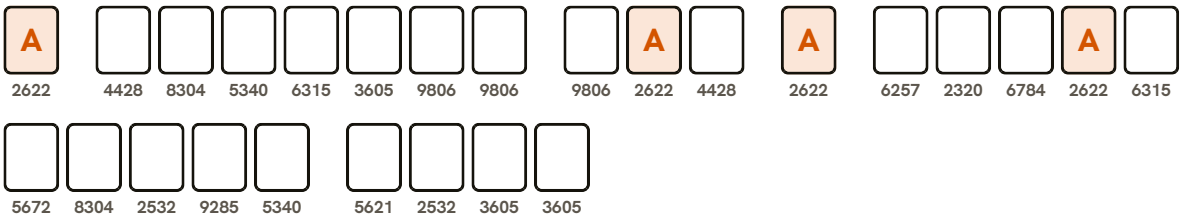


Round 1,381 to the nearest hundred		T	Round 68,789 to the nearest ten thousand		H	Round 1,400,867 to the nearest hundred thousand		E
Round 2,803,575 to the nearest hundred thousand		V	Round 7,019 to the nearest thousand		I	Round 47,147 to the nearest thousand		L
Round 321 to the nearest hundred		A	Round 3,064 to the nearest hundred		N	Round 2,777 to the nearest hundred		C
Round 3,090,693 to the nearest hundred thousand		O	Round 196 to the nearest hundred		W	Round 2,043 to the nearest thousand		R
Round 4,795 to the nearest thousand		P	Round 28,475 to the nearest thousand		J	Round 27 to the nearest ten		U
Round 4,684,251 to the nearest hundred thousand		M						

Scratch space:

CLUE 2 Addition

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

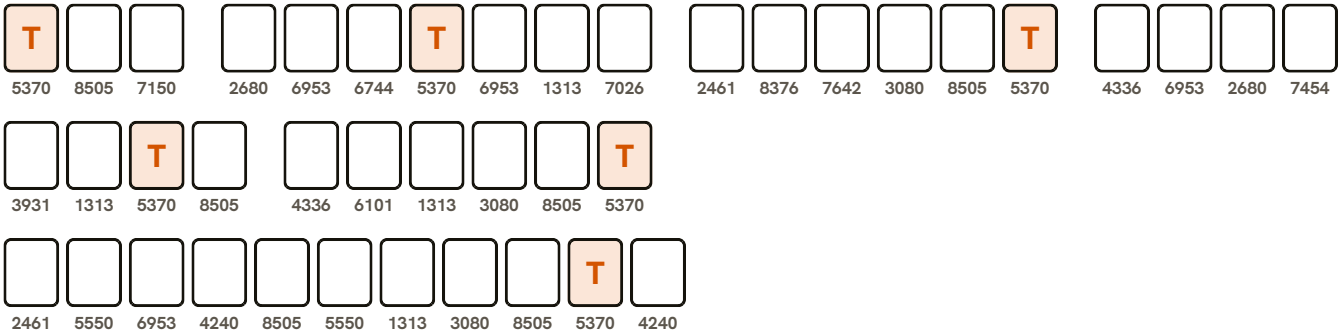


1312 + 1310 =		A	3100 + 1328 =		W	2934 + 5370 =		I
2257 + 3083 =		T	2959 + 3356 =		N	1748 + 1857 =		E
4683 + 5123 =		S	3391 + 2866 =		H	731 + 1589 =		U
3065 + 3719 =		M	2281 + 3391 =		P	1611 + 921 =		L
2901 + 6384 =		O	3261 + 2360 =		F			

Scratch space:

CLUE 3 Subtraction

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

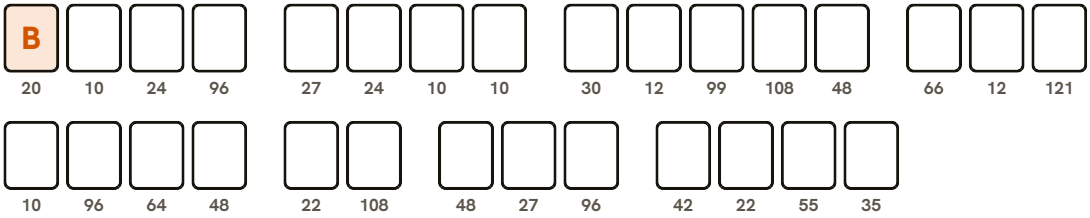


8338 - 2968 =		T	10928 - 2423 =		H	8428 - 1278 =		E
6034 - 3354 =		C	8894 - 1941 =		A	10078 - 3334 =		P
2996 - 1683 =		I	7491 - 465 =		N	4830 - 2369 =		F
8658 - 282 =		O	9070 - 1428 =		U	5319 - 2239 =		G
6401 - 2065 =		B	10542 - 3088 =		K	8583 - 4652 =		W
7647 - 1546 =		R	7878 - 2328 =		L	5264 - 1024 =		S

Scratch space:

CLUE 4 Multiplication facts (1-12)

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



2 × 10 =		B	1 × 10 =		L	12 × 2 =		U
12 × 8 =		E	3 × 9 =		H	5 × 6 =		P
12 × 1 =		A	9 × 11 =		I	9 × 12 =		N
4 × 12 =		T	6 × 11 =		W	11 × 11 =		S
8 × 8 =		F	2 × 11 =		O	6 × 7 =		D
11 × 5 =		C	5 × 7 =		K			

Scratch space:

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

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:

27 ÷ 9 = ☐

110 ÷ 10 = ☐

77 ÷ 11 = ☐

18 ÷ 2 = ☐

25 ÷ 5 = ☐

10 ÷ 10 = ☐

24 ÷ 4 = ☐

24 ÷ 2 = ☐

14 ÷ 7 = ☐

32 ÷ 8 = ☐

20 ÷ 2 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain blasts the door locks, then hides behind a force shield.
2. The villain zooms in fast and quiet, then calls in a swarm of drones.
3. The villain backs up to the cargo bay, then scrambles the alarm wires.
4. The villain zooms in fast and quiet, then vanishes behind a cloaking field.
5. The villain backs up to the cargo bay, then yanks the captain with a tractor beam.
6. The villain blasts the door locks, then vanishes behind a cloaking field.
7. The villain backs up to the cargo bay, then hides behind a force shield.
8. The villain blasts the door locks, then yanks the captain with a tractor beam.
9. The villain blasts the door locks, then calls in a swarm of drones.
10. The villain backs up to the cargo bay, then calls in a swarm of drones.
11. The villain drills through the outer wall, then yanks the captain with a tractor beam.
12. The villain drills through the outer wall, then calls in a swarm of drones.

TEACHER / PARENT

Answer Key

The Case of the Comet Crook

Culprit: Orin Pax

Battle Cruiser · Tractor Beam · human pilot · blue hull · bright flashlights

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN CANNOT WARP JUMP"

Round 1,381 to the nearest hundred = 1400 (T) · Round 68,789 to the nearest ten thousand = 70000 (H) · Round 1,400,867 to the nearest hundred thousand = 1400000 (E) · Round 2,803,575 to the nearest hundred thousand = 2800000 (V) · Round 7,019 to the nearest thousand = 7000 (I) · Round 47,147 to the nearest thousand = 47000 (L) · Round 321 to the nearest hundred = 300 (A) · Round 3,064 to the nearest hundred = 3100 (N) · Round 2,777 to the nearest hundred = 2800 (C) · Round 3,090,693 to the nearest hundred thousand = 3100000 (O) · Round 196 to the nearest hundred = 200 (W) · Round 2,043 to the nearest thousand = 2000 (R) · Round 4,795 to the nearest thousand = 5000 (P) · Round 28,475 to the nearest thousand = 28000 (J) · Round 27 to the nearest ten = 30 (U) · Round 4,684,251 to the nearest hundred thousand = 4700000 (M)

Clue 2 (Addition): "A WITNESS SAW A HUMAN PILOT FLEE"

1312 + 1310 = 2622 (A) · 3100 + 1328 = 4428 (W) · 2934 + 5370 = 8304 (I) · 2257 + 3083 = 5340 (T) · 2959 + 3356 = 6315 (N) · 1748 + 1857 = 3605 (E) · 4683 + 5123 = 9806 (S) · 3391 + 2866 = 6257 (H) · 731 + 1589 = 2320 (U) · 3065 + 3719 = 6784 (M) · 2281 + 3391 = 5672 (P) · 1611 + 921 = 2532 (L) · 2901 + 6384 = 9285 (O) · 3261 + 2360 = 5621 (F)

Clue 3 (Subtraction): "THE CAPTAIN FOUGHT BACK WITH BRIGHT FLASHLIGHTS"

8338 - 2968 = 5370 (T) · 10928 - 2423 = 8505 (H) · 8428 - 1278 = 7150 (E) · 6034 - 3354 = 2680 (C) · 8894 - 1941 = 6953 (A) · 10078 - 3334 = 6744 (P) · 2996 - 1683 = 1313 (I) · 7491 - 465 = 7026 (N) · 4830 - 2369 = 2461 (F) · 8658 - 282 = 8376 (O) · 9070 - 1428 = 7642 (U) · 5319 - 2239 = 3080 (G) · 6401 - 2065 = 4336 (B) · 10542 - 3088 = 7454 (K) · 8583 - 4652 = 3931 (W) · 7647 - 1546 = 6101 (R) · 7878 - 2328 = 5550 (L) · 5264 - 1024 = 4240 (S)

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

2 × 10 = 20 (B) · 1 × 10 = 10 (L) · 12 × 2 = 24 (U) · 12 × 8 = 96 (E) · 3 × 9 = 27 (H) · 5 × 6 = 30 (P) · 12 × 1 = 12 (A) · 9 × 11 = 99 (I) · 9 × 12 = 108 (N) · 4 × 12 = 48 (T) · 6 × 11 = 66 (W) · 11 × 11 = 121 (S) · 8 × 8 = 64 (F) · 2 × 11 = 22 (O) · 6 × 7 = 42 (D) · 11 × 5 = 55 (C) · 5 × 7 = 35 (K)

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

27 ÷ 9 = 3 · 110 ÷ 10 = 11 · 77 ÷ 11 = 7 · 18 ÷ 2 = 9 · 25 ÷ 5 = 5 · 10 ÷ 10 = 1 · 24 ÷ 4 = 6 · 24 ÷ 2 = 12 · 14 ÷ 7 = 2 · 32 ÷ 8 = 4 · 20 ÷ 2 = 10