



The Orbit City Heist

Grade 2 math · Place value, Addition, Subtraction, Skip counting, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone has stolen the legendary Golden Star Map from the high-security vault on Orbit City! The culprit left a trail of glowing cosmic dust. We must find the space bandit before they warp out of the galaxy.

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 space bandit is _____

Possible suspects

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

NAME	JETPACK TYPE	COSMIC TOOL	OXYGEN GAUGE	SPACESUIT TINT	SPACE FOOD ALLERGY
Yuri Gagarin	Quantum Warp	Gravity Glove	Left Wrist Gauge	Silver Chrome Glass	Dehydrated Cheese
Alan Shepard	Quantum Warp	Meteor Magnet	Left Wrist Gauge	Bright Orange Glass	Freeze Dried Apple
Neil Armstrong	Solar Flare Boost	Plasma Torch	Left Wrist Gauge	Silver Chrome Glass	Dehydrated Cheese
Kalpana Chawla	Ion Drift	Laser Cutter	Right Wrist Gauge	Neon Green Glass	Dehydrated Cheese
Mae Jemison	Gravity Glide	Laser Cutter	Left Wrist Gauge	Bright Orange Glass	Freeze Dried Apple
Commander Orion	Solar Flare Boost	Laser Cutter	Right Wrist Gauge	Silver Chrome Glass	Powdered Ice Cream
Major Tom	Solar Flare Boost	Gravity Glove	Left Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Zeta Prime	Nebula Thrust	Starlight Key	Right Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Luna Orbit	Nebula Thrust	Laser Cutter	Right Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Sally Ride	Solar Flare Boost	Starlight Key	Left Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Chris Hadfield	Ion Drift	Meteor Magnet	Left Wrist Gauge	Bright Orange Glass	Freeze Dried Apple
Starbuck	Solar Flare Boost	Plasma Torch	Left Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Gizmo Comet	Gravity Glide	Laser Cutter	Right Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Ziggy Stardust	Gravity Glide	Plasma Torch	Left Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Valentina Tereshkova	Gravity Glide	Gravity Glove	Left Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Helen Sharman	Solar Flare Boost	Meteor Magnet	Left Wrist Gauge	Bright Orange Glass	Powdered Ice Cream
Leo Zenith	Solar Flare Boost	Meteor Magnet	Right Wrist Gauge	Silver Chrome Glass	Freeze Dried Apple
Guion Bluford	Solar Flare Boost	Plasma Torch	Left Wrist Gauge	Silver Chrome Glass	Powdered Ice Cream
John Glenn	Gravity Glide	Meteor Magnet	Right Wrist Gauge	Bright Orange Glass	Powdered Ice Cream
Captain Astro	Gravity Glide	Plasma Torch	Right Wrist Gauge	Neon Green Glass	Freeze Dried Apple
Peggy Whitson	Quantum Warp	Starlight Key	Right Wrist Gauge	Neon Green Glass	Dehydrated Cheese

CLUE 1 Place value

The security terminal on the docking bay displays ship coordinates, but the screens are glitchy. We have to check the value of the hundreds digit to find the cargo ship's real path.

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

T							T							T				
88	18	22	29	42	71	57	84	88	57	72	22	38	71	72	88	68	38	22
T				T							T							
88	18	22	38	88	42	41	20	84	33	18	88	53	22	86				

What number has 8 tens and 8 ones? → **T**

What number has 8 tens and 4 ones? → **I**

What number has 2 tens and 0 ones? → **L**

What number has 6 tens and 8 ones? → **U**

What number has 4 tens and 2 ones? → **A**

What number has 4 tens and 1 one? → **R**

What number has 2 tens and 2 ones? → **E**

What number has 7 tens and 2 ones? → **O**

What number has 5 tens and 7 ones? → **D**

What number has 3 tens and 3 ones? → **G**

What number has 5 tens and 3 ones? → **K**

What number has 8 tens and 6 ones? → **Y**

What number has 1 ten and 8 ones? → **H**

What number has 2 tens and 9 ones? → **B**

What number has 7 tens and 1 one? → **N**

What number has 3 tens and 8 ones? → **S**

Scratch space:

CLUE 2

We found a pile of discarded battery packs near the airlock. If we add up all the charges on these batteries, we can unlock the security footage.

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

A number line from 0 to 100. The boxes for the numbers 27 and 92 are highlighted in orange and labeled with a 'T'.

$16 + 11 = \square \rightarrow \boxed{\text{T}}$

$33 + 51 = \square \rightarrow \boxed{\text{H}}$

$12 + 20 = \boxed{} \rightarrow \boxed{\mathbf{G}}$

$33 + 21 = \square \rightarrow \boxed{\mathbf{R}}$

$39 + 52 = \square \rightarrow \boxed{\text{O}}$

$15 + 25 = \boxed{} \rightarrow \boxed{\text{N}}$

$28 + 66 = \boxed{} \rightarrow \boxed{\text{A}}$

$48 + 34 = \boxed{} \rightarrow \boxed{\text{F}}$

$37 + 50 = \boxed{} \rightarrow \boxed{\text{L}}$

$60 + 30 = \square \rightarrow \boxed{\text{E}}$

$27 + 36 = \square \rightarrow \boxed{\text{I}}$

$28 + 58 = \boxed{} \rightarrow \boxed{\text{W}}$

$29 + 68 = \square \rightarrow \boxed{\text{U}}$

$$64 + 28 = \boxed{} \rightarrow \boxed{\text{S}}$$

Scratch space:

CLUE 3

Subtraction

The emergency oxygen tanks leaked during the escape. Subtract the empty tanks from the total to see how much air we have left to search the station.

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

T																	
19	53	56	16	83	69	48	69	26	69	16	41	83	63	54			
41	83	56	56	62	56	35	83	28	56	35	69	75	75	42	56		

$25 - 6 = \square \rightarrow \boxed{\text{T}}$

$93 - 18 = \square \rightarrow \boxed{\text{P}}$

$59 - 11 = \square \rightarrow \boxed{\text{N}}$

$67 - 11 = \square \rightarrow \boxed{\text{E}}$

$66 - 4 = \square \rightarrow \boxed{\text{Z}}$

$62 - 21 = \square \rightarrow \boxed{\text{F}}$

$48 - 13 = \square \rightarrow \boxed{\text{D}}$

$30 - 2 = \square \rightarrow \boxed{\text{I}}$

$96 - 27 = \square \rightarrow \boxed{\text{A}}$

$81 - 18 = \square \rightarrow \boxed{\text{O}}$

$89 - 6 = \square \rightarrow \boxed{\text{R}}$

$34 - 8 = \square \rightarrow \boxed{\text{W}}$

$78 - 24 = \square \rightarrow \boxed{\text{M}}$

$79 - 26 = \square \rightarrow \boxed{\text{H}}$

$79 - 37 = \square \rightarrow \boxed{\text{L}}$

$52 - 36 = \square \rightarrow \boxed{\text{Y}}$

Scratch space:

CLUE 4 Skip counting

The escape pod launch pad has lights that blink in a pattern. By skip counting the blinking lights, we can trace which launch pad the bandit used.

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

W				W														
70	8	26	80	70	80	65	140	80	26	22	120	65	26	39	140	33	8	21
90	22	21	120	10	8	9	140	80	26	26								

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 → **W**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 → **I**

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

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 → **L**

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 → **H**

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 → **S**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 → **R**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **G**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 → **M**

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

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

Scratch space:

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

The engine room needs exactly enough fuel rods to power the tracking radar. Solve for the missing fuel rods to turn the scanner on.

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:

$9 + \underline{\quad} = 21$

$7 + \underline{\quad} = 12$

$3 + \underline{\quad} = 13$

$2 + \underline{\quad} = 3$

$6 + \underline{\quad} = 12$

$1 + \underline{\quad} = 12$

$1 + \underline{\quad} = 3$

$3 + \underline{\quad} = 12$

$2 + \underline{\quad} = 10$

$3 + \underline{\quad} = 6$

$1 + \underline{\quad} = 8$

Step 2 - cross out the sentence with each answer:

1. The villain activates their quantum warp, then melts the vault lock with a plasma torch.
2. The villain activates their nebula thrust, then melts the vault lock with a plasma torch.
3. The villain activates their nebula thrust, then unlocks the safe using a starlight key.
4. The villain activates their solar flare boost, then grabs the loot using a gravity glove.
5. The villain activates their gravity glide, then melts the vault lock with a plasma torch.
6. The villain activates their gravity glide, then slices through the hatch with a laser cutter.
7. The villain activates their solar flare boost, then attracts space metal with a meteor magnet.
8. The villain activates their quantum warp, then slices through the hatch with a laser cutter.
9. The villain activates their solar flare boost, then slices through the hatch with a laser cutter.
10. The villain activates their solar flare boost, then melts the vault lock with a plasma torch.
11. The villain activates their ion drift, then melts the vault lock with a plasma torch.
12. The villain activates their gravity glide, then grabs the loot using a gravity glove.

Answer Key

The Orbit City Heist

Culprit: Major Tom

Solar Flare Boost · Gravity Glove · Left Wrist Gauge · Silver Chrome Glass · Freeze Dried Apple

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE BANDIT DOES NOT USE THE STARLIGHT KEY"

What number has 8 tens and 8 ones? = 88 (T) · What number has 8 tens and 4 ones? = 84 (I) · What number has 2 tens and 0 ones? = 20 (L) · What number has 6 tens and 8 ones? = 68 (U) · What number has 4 tens and 2 ones? = 42 (A) · What number has 4 tens and 1 one? = 41 (R) · What number has 2 tens and 2 ones? = 22 (E) · What number has 7 tens and 2 ones? = 72 (O) · What number has 5 tens and 7 ones? = 57 (D) · What number has 3 tens and 3 ones? = 33 (G) · What number has 5 tens and 3 ones? = 53 (K) · What number has 8 tens and 6 ones? = 86 (Y) · What number has 1 ten and 8 ones? = 18 (H) · What number has 2 tens and 9 ones? = 29 (B) · What number has 7 tens and 1 one? = 71 (N) · What number has 3 tens and 8 ones? = 38 (S)

Clue 2 (Addition): "THE GAUGE WAS ON THE LEFT WRIST"

$16 + 11 = 27$ (T) · $33 + 51 = 84$ (H) · $12 + 20 = 32$ (G) · $33 + 21 = 54$ (R) · $39 + 52 = 91$ (O) · $15 + 25 = 40$ (N) · $28 + 66 = 94$ (A) · $48 + 34 = 82$ (F) · $37 + 50 = 87$ (L) · $60 + 30 = 90$ (E) · $27 + 36 = 63$ (I) · $28 + 58 = 86$ (W) · $29 + 68 = 97$ (U) · $64 + 28 = 92$ (S)

Clue 3 (Subtraction): "THEY RAN AWAY FROM FREEZE DRIED APPLE"

$25 - 6 = 19$ (T) · $93 - 18 = 75$ (P) · $59 - 11 = 48$ (N) · $67 - 11 = 56$ (E) · $66 - 4 = 62$ (Z) · $62 - 21 = 41$ (F) · $48 - 13 = 35$ (D) · $30 - 2 = 28$ (I) · $96 - 27 = 69$ (A) · $81 - 18 = 63$ (O) · $89 - 6 = 83$ (R) · $34 - 8 = 26$ (W) · $78 - 24 = 54$ (M) · $79 - 26 = 53$ (H) · $79 - 37 = 42$ (L) · $52 - 36 = 16$ (Y)

Clue 4 (Skip counting): "WE SAW A FLASH OF SILVER CHROME GLASS"

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 = 70 (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 = 39 (I) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (V) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (C) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (L) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (A) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 = 22 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (O) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (S) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (R) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (G) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 = 10 (M) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (F) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (E)

Clue 5 (Missing addends): surviving statement is box 4 → Major Tom

$9 + \underline{\quad} = 21 = 12$ · $7 + \underline{\quad} = 12 = 5$ · $3 + \underline{\quad} = 13 = 10$ · $2 + \underline{\quad} = 3 = 1$ · $6 + \underline{\quad} = 12 = 6$ · $1 + \underline{\quad} = 12 = 11$ · $1 + \underline{\quad} = 3 = 2$ · $3 + \underline{\quad} = 12 = 9$ · $2 + \underline{\quad} = 10 = 8$ · $3 + \underline{\quad} = 6 = 3$ · $1 + \underline{\quad} = 8 = 7$