



The Star-Hoop Hijack

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

Detective: _____ Date: _____

The championship trophy of the Galactic Hoop League has been stolen! A sneaky Star-Snatcher bypassed the mecha-security, tricked the Arena Referee, and flew off into the cosmos. It is up to you to decode the clues, track down the thief, and save the tournament!

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 Star-Snatcher is _____

Possible suspects

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

NAME	CYBER-SKILL	SPACE GEAR	VISOR TYPE	JETPACK TRAIL	SYSTEM GLITCH
Bouncer Bot	Rocket Dunk	Mecha Horn	Golden Visor	Neon Pink Sparks	Squeaky Toy Sound
Pixel Kitty	Pixel Blast	Nether Sword	Cyber Goggles	Glitchy Green Pixels	Magnetic Net
Meow Jordan	Laser Dribble	Yarn Grenade	Golden Visor	Starlight Blue Smoke	Squeaky Toy Sound
Gizmo Gomez	Gravity Hack	Hover Board	Golden Visor	Glitchy Green Pixels	Magnetic Net
Pegleg Pip	Teleport Jump	Hover Board	Golden Visor	Starlight Blue Smoke	Squeaky Toy Sound
Neon Nova	Rocket Dunk	Robo Claw	Cyber Goggles	Neon Pink Sparks	Squeaky Toy Sound
Luna Loop	Pixel Blast	Hover Board	Cyber Goggles	Glitchy Green Pixels	Magnetic Net
Salty Whiskers	Pixel Blast	Mecha Horn	Golden Visor	Neon Pink Sparks	Magnetic Net
Laser Lynx	Laser Dribble	Mecha Horn	Golden Visor	Neon Pink Sparks	Squeaky Toy Sound
Robo Barnaby	Laser Dribble	Mecha Horn	Golden Visor	Glitchy Green Pixels	Magnetic Net
Mecha Whiskers	Laser Dribble	Nether Sword	Cyber Goggles	Starlight Blue Smoke	Squeaky Toy Sound
Capn Sparky	Gravity Hack	Yarn Grenade	Golden Visor	Glitchy Green Pixels	Magnetic Net
Astro Mittens	Pixel Blast	Hover Board	Cyber Goggles	Glitchy Green Pixels	Water Splash
Cosmo Paws	Rocket Dunk	Mecha Horn	Cyber Goggles	Glitchy Green Pixels	Magnetic Net
Coby Cat	Pixel Blast	Hover Board	Cyber Goggles	Neon Pink Sparks	Water Splash
LeBron Claws	Laser Dribble	Hover Board	Cyber Goggles	Glitchy Green Pixels	Squeaky Toy Sound
Sprocket	Laser Dribble	Mecha Horn	Cyber Goggles	Neon Pink Sparks	Water Splash
Sir Purrfect	Teleport Jump	Mecha Horn	Golden Visor	Glitchy Green Pixels	Magnetic Net
Cyber Claw	Laser Dribble	Yarn Grenade	Golden Visor	Glitchy Green Pixels	Squeaky Toy Sound
Rusty Hook	Teleport Jump	Yarn Grenade	Golden Visor	Glitchy Green Pixels	Magnetic Net
Goldie Horn	Rocket Dunk	Nether Sword	Cyber Goggles	Starlight Blue Smoke	Squeaky Toy Sound

CLUE 1 Place value

The escape pod console has a digital keypad. We need to check the value of the hundreds digit to unlock the coordinates of the suspect's ship.

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

T			T																
8000	2000	40	8000	2000	30	40	60	1000	100	40	10	70	100	8000	50	10	40	500	
2000	100	90	40	900	600	100	500	900	1000										

What is the value of the 8 in 78,193? → **T**

What is the value of the 6 in 3,168? → **F**

What is the value of the 5 in 9,452? → **U**

What is the value of the 2 in 2,948? → **H**

What is the value of the 3 in 9,730? → **I**

What is the value of the 1 in 51,422? → **D**

What is the value of the 9 in 4,981? → **R**

What is the value of the 1 in 167? → **O**

What is the value of the 5 in 4,574? → **A**

What is the value of the 1 in 8,215? → **S**

What is the value of the 7 in 3,478? → **N**

What is the value of the 6 in 615? → **B**

What is the value of the 9 in 196? → **V**

What is the value of the 4 in 2,740? → **E**

Scratch space:

CLUE 2 Addition

A team of repair droids is counting the lost space-energy cubes. Add up the power packs we found in the locker room to find where the thief went next.

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

T																			
5506	8549	5523	5969	7232	5969	9833	5523	2329	5506	8549	5017	3699	5017	5969	8549	5715	4063	9467	
7074	6736	6710	3699	5523	4063	9892	5715	5969	6736	9107									

$2861 + 2645 = \square \rightarrow \text{T}$	$3072 + 2897 = \square \rightarrow \text{S}$	$4246 + 5221 = \square \rightarrow \text{Y}$
$1761 + 1938 = \square \rightarrow \text{D}$	$1669 + 3854 = \square \rightarrow \text{E}$	$3430 + 1587 = \square \rightarrow \text{A}$
$2068 + 1995 = \square \rightarrow \text{N}$	$2836 + 4238 = \square \rightarrow \text{G}$	$4869 + 4964 = \square \rightarrow \text{P}$
$2967 + 6925 = \square \rightarrow \text{V}$	$986 + 1343 = \square \rightarrow \text{C}$	$2447 + 4263 = \square \rightarrow \text{L}$
$5619 + 3488 = \square \rightarrow \text{R}$	$4877 + 2355 = \square \rightarrow \text{U}$	$2976 + 2739 = \square \rightarrow \text{I}$
$3971 + 2765 = \square \rightarrow \text{O}$	$3804 + 4745 = \square \rightarrow \text{H}$	

Scratch space:

CLUE 3

Subtraction

The pirate ship has a leak in its fuel tank! Subtract the lost fuel gallons from the total amount to find how far the suspect can fly.

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

T				T													
4639	5163	2986	8565	4639	4852	6366	7959	2002	1918	1918	2986	2002	2545	2002	2545	2986	

					T					T
2027	2986	2255	2545	6366	4639	2002	1712	2545	6366	4639

$6884 - 2245 = \square \rightarrow \text{[T]}$

$11045 - 3086 = \square \rightarrow \text{[V]}$

$5833 - 3915 = \square \rightarrow \text{[L]}$

$9565 - 4402 = \square \rightarrow \text{[R]}$

$6286 - 4259 = \square \rightarrow \text{[M]}$

$6849 - 1997 = \square \rightarrow \text{[H]}$

$5516 - 2530 = \square \rightarrow \text{[A]}$

$6679 - 4677 = \square \rightarrow \text{[I]}$

$2801 - 1089 = \square \rightarrow \text{[C]}$

$6370 - 4115 = \square \rightarrow \text{[G]}$

$9606 - 3240 = \square \rightarrow \text{[E]}$

$12226 - 3661 = \square \rightarrow \text{[P]}$

$3458 - 913 = \square \rightarrow \text{[N]}$

Scratch space:

Multiplication facts (1-12)

We found rows of mysterious glowing blocks stacked in the cargo hold. Multiply the rows by the blocks in each row to crack the security seal.

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

Diagram illustrating the sequence of numbers and the position of the letter 'L' in the sequence:

33	24	24	72	66	24	110	99	33	14	100	50	40	49	99	110	27	27	70
80	14	48	27	33	77													

The letter 'L' is positioned above the number 33 in the 9th position of the top row and above the number 33 in the 5th position of the bottom row.

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

$10 \times 5 = \boxed{} \rightarrow \text{C}$

$$6 \times 11 = \boxed{} \rightarrow \boxed{\text{F}}$$

$11 \times 7 = \square \rightarrow \mathbf{S}$

$9 \times 3 = \square \rightarrow \boxed{\mathbf{E}}$

$7 \times 2 = \boxed{} \rightarrow \boxed{\text{I}}$

$$9 \times 11 = \boxed{} \rightarrow \text{G}$$

$$7 \times 7 = \boxed{} \rightarrow \boxed{\text{Y}}$$

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

$$10 \times 7 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$4 \times 12 = \boxed{} \rightarrow \boxed{\mathbf{X}}$$

$$10 \times 11 = \boxed{} \rightarrow \boxed{\mathbf{R}}$$

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

$$3 \times 8 = \boxed{} \rightarrow \boxed{0}$$

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

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

Scratch space:

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

The robot guards want to share their battery packs equally. Divide the total batteries among the squads to find the secret channel code.

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:

$27 \div 3 = \boxed{}$

$66 \div 6 = \boxed{}$

$12 \div 6 = \boxed{}$

$40 \div 5 = \boxed{}$

$4 \div 4 = \boxed{}$

$8 \div 2 = \boxed{}$

$144 \div 12 = \boxed{}$

$55 \div 11 = \boxed{}$

$30 \div 10 = \boxed{}$

$30 \div 5 = \boxed{}$

$110 \div 11 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain teleported right past the guards, then swung a glowing nether sword.
2. The villain teleported right past the guards, then charged ahead with a mecha horn.
3. The villain blasted pixel blocks to make a path, then swung a glowing nether sword.
4. The villain blasted pixel blocks to make a path, then threw a wild yarn grenade.
5. The villain blasted pixel blocks to make a path, then charged ahead with a mecha horn.
6. The villain turned off gravity in the trophy room, then grabbed the prize with a robo claw.
7. The villain turned off gravity in the trophy room, then threw a wild yarn grenade.
8. The villain slammed a rocket dunk into the safe, then escaped on a fast hover board.
9. The villain dribbled a laser ball through the hoop, then charged ahead with a mecha horn.
10. The villain dribbled a laser ball through the hoop, then grabbed the prize with a robo claw.
11. The villain teleported right past the guards, then threw a wild yarn grenade.
12. The villain slammed a rocket dunk into the safe, then swung a glowing nether sword.

Answer Key

The Star-Hoop Hijack

Culprit: Capn Sparky

Gravity Hack · Yarn Grenade · Golden Visor · Glitchy Green Pixels · Magnetic Net

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

Clue 1 (Place value): "THE THIEF DOES NOT USE A HOVER BOARD"

What is the value of the 8 in 78,193? = 8000 (T) · What is the value of the 6 in 3,168? = 60 (F) · What is the value of the 5 in 9,452? = 50 (U) · What is the value of the 2 in 2,948? = 2000 (H) · What is the value of the 3 in 9,730? = 30 (I) · What is the value of the 1 in 51,422? = 1000 (D) · What is the value of the 9 in 4,981? = 900 (R) · What is the value of the 1 in 167? = 100 (O) · What is the value of the 5 in 4,574? = 500 (A) · What is the value of the 1 in 8,215? = 10 (S) · What is the value of the 7 in 3,478? = 70 (N) · What is the value of the 6 in 615? = 600 (B) · What is the value of the 9 in 196? = 90 (V) · What is the value of the 4 in 2,740? = 40 (E)

Clue 2 (Addition): "THE SUSPECT HAD A SHINY GOLDEN VISOR"

2861 + 2645 = 5506 (T) · 3072 + 2897 = 5969 (S) · 4246 + 5221 = 9467 (Y) · 1761 + 1938 = 3699 (D) · 1669 + 3854 = 5523 (E) · 3430 + 1587 = 5017 (A) · 2068 + 1995 = 4063 (N) · 2836 + 4238 = 7074 (G) · 4869 + 4964 = 9833 (P) · 2967 + 6925 = 9892 (V) · 986 + 1343 = 2329 (C) · 2447 + 4263 = 6710 (L) · 5619 + 3488 = 9107 (R) · 4877 + 2355 = 7232 (U) · 2976 + 2739 = 5715 (I) · 3971 + 2765 = 6736 (O) · 3804 + 4745 = 8549 (H)

Clue 3 (Subtraction): "TRAP THE VILLAIN IN A MAGNETIC NET"

6884 - 2245 = 4639 (T) · 11045 - 3086 = 7959 (V) · 5833 - 3915 = 1918 (L) · 9565 - 4402 = 5163 (R) · 6286 - 4259 = 2027 (M) · 6849 - 1997 = 4852 (H) · 5516 - 2530 = 2986 (A) · 6679 - 4677 = 2002 (I) · 2801 - 1089 = 1712 (C) · 6370 - 4115 = 2255 (G) · 9606 - 3240 = 6366 (E) · 12226 - 3661 = 8565 (P) · 3458 - 913 = 2545 (N)

Clue 4 (Multiplication facts (1-12)): "LOOK FOR GLITCHY GREEN PIXELS"

3 × 11 = 33 (L) · 10 × 5 = 50 (C) · 6 × 11 = 66 (F) · 11 × 7 = 77 (S) · 9 × 3 = 27 (E) · 7 × 2 = 14 (I) · 9 × 11 = 99 (G) · 7 × 7 = 49 (Y) · 10 × 10 = 100 (T) · 10 × 7 = 70 (N) · 4 × 12 = 48 (X) · 10 × 11 = 110 (R) · 8 × 10 = 80 (P) · 3 × 8 = 24 (O) · 5 × 8 = 40 (H) · 6 × 12 = 72 (K)

Clue 5 (Division facts (1-12)): surviving statement is box 7 → Capn Sparky

27 ÷ 3 = 9 · 66 ÷ 6 = 11 · 12 ÷ 6 = 2 · 40 ÷ 5 = 8 · 4 ÷ 4 = 1 · 8 ÷ 2 = 4 · 144 ÷ 12 = 12 · 55 ÷ 11 = 5 · 30 ÷ 10 = 3 · 30 ÷ 5 = 6 · 110 ÷ 11 = 10