



The Great Space Crystal Mystery

Grade 1 math · Addition, Subtraction, Skip counting, Place value, Missing addends · Reading level grades 1-2

Detective: _____ Date: _____

The shiny Golden Space Crystal is gone! Someone took it from the Star Base dome. We must find the Cosmic Crook before they launch their rocket!

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 Cosmic Crook is _____

Possible suspects

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

NAME	SUIT POWER	GADGET	DOMINANT GLOVE	HAIR COLOR	WEAKNESS
John	rocket jet pack	star decoder	right handed glove	bright blue hair	heavy magnet trap
Victor	zero gravity boots	cosmic camera	right handed glove	comet orange hair	heavy magnet trap
Sunita	rocket jet pack	mini radar	right handed glove	shiny silver hair	sticky space gel
Tim	rocket jet pack	cosmic camera	right handed glove	bright blue hair	heavy magnet trap
Mae	force field shield	mini radar	left handed glove	bright blue hair	bright strobe lights
Scott	super magnet belt	gravity lifter	right handed glove	shiny silver hair	bright strobe lights
Buzz	rocket jet pack	plasma torch	left handed glove	comet orange hair	sticky space gel
Jessica	rocket jet pack	mini radar	right handed glove	comet orange hair	heavy magnet trap
Valentina	super magnet belt	cosmic camera	left handed glove	comet orange hair	sticky space gel
Sally	force field shield	plasma torch	right handed glove	shiny silver hair	bright strobe lights
Christina	rocket jet pack	plasma torch	right handed glove	comet orange hair	sticky space gel
Helen	zero gravity boots	plasma torch	left handed glove	comet orange hair	heavy magnet trap
Anne	super magnet belt	gravity lifter	left handed glove	comet orange hair	sticky space gel
Guion	rocket jet pack	star decoder	right handed glove	comet orange hair	heavy magnet trap
Kalpana	zero gravity boots	cosmic camera	left handed glove	comet orange hair	sticky space gel
Reid	super magnet belt	mini radar	left handed glove	comet orange hair	sticky space gel
Kimiya	super magnet belt	cosmic camera	left handed glove	comet orange hair	heavy magnet trap
Woody	laser blaster glove	plasma torch	right handed glove	comet orange hair	bright strobe lights
Yuri	super magnet belt	cosmic camera	left handed glove	bright blue hair	sticky space gel
Mark	rocket jet pack	gravity lifter	left handed glove	comet orange hair	heavy magnet trap
Chris	rocket jet pack	star decoder	right handed glove	comet orange hair	sticky space gel

CLUE 1 Addition

A cadet counts the shiny fuel cans on the rack. We add more cans to get the total. A computer prints a card.

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

$11 + 4 = \square \rightarrow \boxed{\mathbf{T}}$

$5 + 8 = \square \rightarrow \boxed{\text{H}}$

$7 + 2 = \square \rightarrow \text{C}$

$9 + 10 = \boxed{} \rightarrow \boxed{\mathbf{S}}$

$2 + 4 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

$$12 + 6 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$2 + 5 = \boxed{} \rightarrow \boxed{\text{R}}$$

$12 + 4 = \boxed{} \rightarrow \boxed{\mathbf{D}}$

$$2 + 3 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$14 + 6 = \boxed{} \rightarrow \boxed{\text{E}}$

$$5 + 9 = \boxed{} \rightarrow \boxed{0}$$

$$3 + 1 = \boxed{} \rightarrow \boxed{\mathbf{M}}$$

$1 + 1 = \boxed{} \rightarrow \boxed{\text{L}}$

$5 + 5 = \square \rightarrow \boxed{\mathbf{P}}$

Scratch space:

CLUE 2

Subtraction

The space station lost some water packs from the kitchen. We take away the missing packs. A locker pops open.

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

T									T										T
1	6	3	15	13	7	10	2	1	16	5	3	10	13	14	3	11	1		

6	13	7	10	3	10	18	14	12	4	3	

$5 - 4 = \square \rightarrow \boxed{\text{T}}$

$17 - 1 = \square \rightarrow \boxed{\text{U}}$

$11 - 5 = \square \rightarrow \boxed{\text{H}}$

$7 - 2 = \square \rightarrow \boxed{\text{S}}$

$9 - 6 = \square \rightarrow \boxed{\text{E}}$

$19 - 4 = \square \rightarrow \boxed{\text{B}}$

$18 - 4 = \square \rightarrow \boxed{\text{L}}$

$20 - 2 = \square \rightarrow \boxed{\text{G}}$

$5 - 1 = \square \rightarrow \boxed{\text{V}}$

$18 - 7 = \square \rightarrow \boxed{\text{F}}$

$16 - 9 = \square \rightarrow \boxed{\text{N}}$

$4 - 2 = \square \rightarrow \boxed{\text{I}}$

$17 - 5 = \square \rightarrow \boxed{\text{O}}$

$19 - 6 = \square \rightarrow \boxed{\text{A}}$

$14 - 4 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 3 Skip counting

We count the blinking stars in the sky by twos. This opens the star safe. Inside is a dusty notebook.

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

S						S											
42	25	140	130	15	50	42	110	39	130	60	100	60	36	80	140	36	36
25	55	39	110	25	70	60	25	70	140	60	45						

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **S**

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, __, 65, 70 → **E**

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

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

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

Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 → **K**

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 → **L**

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

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

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 → **C**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 → **T**

Scratch space:

CLUE 4 Place value

The big computer screen shows groups of tens and ones. We read the numbers. A secret drawer slides out.

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

C																	
67	86	41	22	80	86	14	35	31	94	22	64	35	79	14	28	35	55
68	22	45	80	86	31	80	64	22	64	22	68	41	22	80			

What number has 6 tens and 7 ones? → **C**

What number has 5 tens and 5 ones? → **S**

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

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

What number has 2 tens and 8 ones? → **W**

What number has 4 tens and 5 ones? → **F**

What number has 8 tens and 0 ones? → **T**

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

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

What number has 7 tens and 9 ones? → **I**

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

What number has 1 ten and 4 ones? → **R**

What number has 6 tens and 4 ones? → **H**

What number has 3 tens and 1 one? → **N**

What number has 9 tens and 4 ones? → **G**

Scratch space:

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

We have six space suits but we need ten. We find how many more we must get. A map drops from the ceiling.

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:

$8 + \underline{\quad} = 16$

$5 + \underline{\quad} = 10$

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

$10 + \underline{\quad} = 16$

$7 + \underline{\quad} = 16$

$7 + \underline{\quad} = 17$

$10 + \underline{\quad} = 17$

$10 + \underline{\quad} = 21$

$5 + \underline{\quad} = 17$

$10 + \underline{\quad} = 14$

$5 + \underline{\quad} = 7$

Step 2 - cross out the sentence with each answer:

1. The villain grabs metal keys with a magnet belt, then takes pictures using a cosmic camera.
2. The villain floats away with zero gravity boots, then melts the lock using a plasma torch.
3. The villain grabs metal keys with a magnet belt, then lifts heavy crates with a gravity lifter.
4. The villain blocks guards with a force field, then reads alien codes with a star decoder.
5. The villain grabs metal keys with a magnet belt, then finds the escape hatch with a mini radar.
6. The villain grabs metal keys with a magnet belt, then reads alien codes with a star decoder.
7. The villain blasts a path with a laser glove, then melts the lock using a plasma torch.
8. The villain floats away with zero gravity boots, then takes pictures using a cosmic camera.
9. The villain floats away with zero gravity boots, then finds the escape hatch with a mini radar.
10. The villain flies up using a rocket jet pack, then reads alien codes with a star decoder.
11. The villain flies up using a rocket jet pack, then finds the escape hatch with a mini radar.
12. The villain blocks guards with a force field, then lifts heavy crates with a gravity lifter.

Answer Key

The Great Space Crystal Mystery

Culprit: Anne

super magnet belt · gravity lifter · left handed glove · comet orange hair · sticky space gel

Trail: Start 21 → Clue 1 16 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SCAMP DOES NOT HAVE THE PLASMA TORCH"

$11 + 4 = 15$ (T) · $5 + 8 = 13$ (H) · $7 + 2 = 9$ (C) · $9 + 10 = 19$ (S) · $2 + 4 = 6$ (A) · $12 + 6 = 18$ (N) · $2 + 5 = 7$ (R) · $12 + 4 = 16$ (D) · $2 + 3 = 5$ (V) · $14 + 6 = 20$ (E) · $5 + 9 = 14$ (O) · $3 + 1 = 4$ (M) · $1 + 1 = 2$ (L) · $5 + 5 = 10$ (P)

Clue 2 (Subtraction): "THE BANDIT USED A LEFT HANDED GLOVE"

$5 - 4 = 1$ (T) · $17 - 1 = 16$ (U) · $11 - 5 = 6$ (H) · $7 - 2 = 5$ (S) · $9 - 6 = 3$ (E) · $19 - 4 = 15$ (B) · $18 - 4 = 14$ (L) · $20 - 2 = 18$ (G) · $5 - 1 = 4$ (V) · $18 - 7 = 11$ (F) · $16 - 9 = 7$ (N) · $4 - 2 = 2$ (I) · $17 - 5 = 12$ (O) · $19 - 6 = 13$ (A) · $14 - 4 = 10$ (D)

Clue 3 (Skip counting): "STICKY SPACE GEL WILL TRAP THE THIEF"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (G) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, __, 65, 70 = 60 (E) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (I) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 = 39 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (F) · Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 = 15 (K) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (P) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (R) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (L) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 = 70 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (W) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, 70 = 50 (Y) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 = 130 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (T)

Clue 4 (Place value): "COMET ORANGE HAIR WAS LEFT ON THE HELMET"

What number has 6 tens and 7 ones? = 67 (C) · What number has 5 tens and 5 ones? = 55 (S) · What number has 4 tens and 1 one? = 41 (M) · What number has 6 tens and 8 ones? = 68 (L) · What number has 2 tens and 8 ones? = 28 (W) · What number has 4 tens and 5 ones? = 45 (F) · What number has 8 tens and 0 ones? = 80 (T) · What number has 8 tens and 6 ones? = 86 (O) · What number has 2 tens and 2 ones? = 22 (E) · What number has 7 tens and 9 ones? = 79 (I) · What number has 3 tens and 5 ones? = 35 (A) · What number has 1 ten and 4 ones? = 14 (R) · What number has 6 tens and 4 ones? = 64 (H) · What number has 3 tens and 1 one? = 31 (N) · What number has 9 tens and 4 ones? = 94 (G)

Clue 5 (Missing addends): surviving statement is box 3 → Anne

$8 + \underline{\quad} = 16 = 8$ · $5 + \underline{\quad} = 10 = 5$ · $2 + \underline{\quad} = 3 = 1$ · $10 + \underline{\quad} = 16 = 6$ · $7 + \underline{\quad} = 16 = 9$ · $7 + \underline{\quad} = 17 = 10$ · $10 + \underline{\quad} = 17 = 7$ · $10 + \underline{\quad} = 21 = 11$ · $5 + \underline{\quad} = 17 = 12$ · $10 + \underline{\quad} = 14 = 4$ · $5 + \underline{\quad} = 7 = 2$