



The Spark Pylon Mystery

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

Detective: _____ Date: _____

Oh no! A sneaky thief took the Spark Pylon! Now the Odyssey airship cannot fly. We must find the thief and save our adventure!

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 Power Moon Bandit is _____

Possible suspects

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

NAME	CAPTURE FORM	HAT TYPE	THROW HAND	HAIR COLOR	FOIL ITEM
Peach	Frog	Sombrero	Right Hand	White	Cappy
Madame Broode	T-Rex	Chef Hat	Right Hand	Yellow	Ground Pound
Shy Guy	Glydon	Chef Hat	Left Hand	Brown	Life-Up Heart
Goomba	Glydon	Space Helmet	Left Hand	Yellow	Cappy
Kamek	Cheep Cheep	Sombrero	Right Hand	Yellow	Ground Pound
Donkey Kong	T-Rex	Space Helmet	Left Hand	Brown	Ground Pound
Bowser	Cheep Cheep	Sombrero	Right Hand	Brown	Life-Up Heart
Bowser Jr	Goomba Stack	Chef Hat	Right Hand	Yellow	Life-Up Heart
Tiara	Cheep Cheep	Sombrero	Left Hand	Yellow	Cappy
Lakitu	T-Rex	Sombrero	Left Hand	Yellow	Life-Up Heart
Yoshi	Goomba Stack	Chef Hat	Left Hand	Brown	Life-Up Heart
Mario	Glydon	Sombrero	Left Hand	Brown	Cappy
Koopa Troopa	T-Rex	Sombrero	Left Hand	White	Cappy
Pauline	Cheep Cheep	Space Helmet	Left Hand	Yellow	Life-Up Heart
Wario	Cheep Cheep	Pirate Hat	Right Hand	Yellow	Life-Up Heart
Topper	Frog	Pirate Hat	Right Hand	Yellow	Cappy
Toad	T-Rex	Pirate Hat	Left Hand	Brown	Life-Up Heart
Luigi	T-Rex	Chef Hat	Right Hand	Brown	Life-Up Heart
Cappy	T-Rex	Space Helmet	Left Hand	Brown	Life-Up Heart
Rango	Goomba Stack	Sombrero	Right Hand	Brown	Life-Up Heart
Waluigi	Frog	Fedora	Left Hand	Brown	Life-Up Heart

CLUE 1 Addition

We count the Power Moons we found in the sand. Let us add them up to find a clue!

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

T																T
59	77	52	69	79	24	24	88	79	96	65	73	52	84	96	73	59

															T
83	52	88	22	88	84	82	88	94	52	77	52	24	91	52	59

$18 + 41 = \square \rightarrow$ T	$51 + 37 = \square \rightarrow$ A	$14 + 10 = \square \rightarrow$ L
$22 + 30 = \square \rightarrow$ E	$25 + 58 = \square \rightarrow$ W	$61 + 30 = \square \rightarrow$ M
$12 + 10 = \square \rightarrow$ R	$30 + 47 = \square \rightarrow$ H	$33 + 36 = \square \rightarrow$ V
$39 + 57 = \square \rightarrow$ N	$43 + 39 = \square \rightarrow$ P	$38 + 46 = \square \rightarrow$ S
$51 + 28 = \square \rightarrow$ I	$36 + 29 = \square \rightarrow$ D	$31 + 42 = \square \rightarrow$ O
$49 + 45 = \square \rightarrow$ C		

Scratch space:

CLUE 2

Subtraction

Some Goombas ran away from our stack. We subtract the ones who left to see what remains!

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

T				T												T	
19	77	73	29	19	77	28	73	36	27	30	42	42	29	36	34	19	77

T						T				
19	77	73	57	73	32	19	77	30	78	60

$24 - 5 = \square \rightarrow \boxed{\text{T}}$

$115 - 37 = \square \rightarrow \boxed{\text{N}}$

$91 - 34 = \square \rightarrow \boxed{\text{L}}$

$117 - 40 = \square \rightarrow \boxed{\text{H}}$

$61 - 19 = \square \rightarrow \boxed{\text{P}}$

$86 - 13 = \square \rightarrow \boxed{\text{E}}$

$73 - 13 = \square \rightarrow \boxed{\text{D}}$

$51 - 23 = \square \rightarrow \boxed{\text{R}}$

$61 - 31 = \square \rightarrow \boxed{\text{A}}$

$66 - 32 = \square \rightarrow \boxed{\text{I}}$

$28 - 1 = \square \rightarrow \boxed{\text{C}}$

$30 - 1 = \square \rightarrow \boxed{\text{Y}}$

$38 - 2 = \square \rightarrow \boxed{\text{W}}$

$55 - 23 = \square \rightarrow \boxed{\text{F}}$

Scratch space:

CLUE 3
Place value

The Odyssey ship radar shows a code. We look at the tens and ones place to read it.

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

T																	
42	83	66	64	26	11	60	37	26	58	16	11	46	86	37	66	84	55

				T
83	66	11	26	42

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

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

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

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

What number has 1 ten and 1 one? → **A**

What number has 1 ten and 6 ones? → **M**

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

What number has 3 tens and 7 ones? → **F**

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

What number has 6 tens and 0 ones? → **N**

What number has 5 tens and 8 ones? → **O**

What number has 2 tens and 6 ones? → **R**

What number has 6 tens and 6 ones? → **E**

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

Scratch space:

CLUE 4 Skip counting

We hop along the stone steps in the sky. We count by twos to reach the high ledge!

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

W														
30	65	6	130	45	100	80	8	33	120	27	100	80	8	130
			W											
24	120	130	30	100	22	27	26	120						

Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 → **W**

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

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

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

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

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

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

Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 → **F**

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

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

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

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

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

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

→

H

Scratch space:

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

We need ten purple coins to buy a hat. We have six. Let us find how many more we need!

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:

$8 + \underline{\quad} = 12$

$5 + \underline{\quad} = 6$

$8 + \underline{\quad} = 11$

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

$3 + \underline{\quad} = 5$

$1 + \underline{\quad} = 9$

$5 + \underline{\quad} = 16$

$5 + \underline{\quad} = 12$

$9 + \underline{\quad} = 19$

$1 + \underline{\quad} = 10$

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

Step 2 - cross out the sentence with each answer:

1. The villain stacked up like goombas, then spilled a fancy chef hat.
2. The villain swam like a fish, then floated in a space helmet.
3. The villain hopped like a frog, then dropped a cool fedora.
4. The villain roared like a t-rex, then lost a pirate hat.
5. The villain glided through the air, then spilled a fancy chef hat.
6. The villain glided through the air, then floated in a space helmet.
7. The villain stacked up like goombas, then lost their sombrero.
8. The villain roared like a t-rex, then spilled a fancy chef hat.
9. The villain hopped like a frog, then lost a pirate hat.
10. The villain swam like a fish, then lost a pirate hat.
11. The villain swam like a fish, then spilled a fancy chef hat.
12. The villain hopped like a frog, then spilled a fancy chef hat.

Answer Key

The Spark Pylon Mystery

Culprit: Shy Guy

Glydon · Chef Hat · Left Hand · Brown · Life-Up Heart

Trail: Start 21 → Clue 1 17 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT WEAR A SPACE HELMET"

$18 + 41 = 59$ (T) · $51 + 37 = 88$ (A) · $14 + 10 = 24$ (L) · $22 + 30 = 52$ (E) · $25 + 58 = 83$ (W) · $61 + 30 = 91$ (M) · $12 + 10 = 22$ (R) · $30 + 47 = 77$ (H) · $33 + 36 = 69$ (V) · $39 + 57 = 96$ (N) · $43 + 39 = 82$ (P) · $38 + 46 = 84$ (S) · $51 + 28 = 79$ (I) · $36 + 29 = 65$ (D) · $31 + 42 = 73$ (O) · $49 + 45 = 94$ (C)

Clue 2 (Subtraction): "THEY THREW CAPPY WITH THE LEFT HAND"

$24 - 5 = 19$ (T) · $115 - 37 = 78$ (N) · $91 - 34 = 57$ (L) · $117 - 40 = 77$ (H) · $61 - 19 = 42$ (P) · $86 - 13 = 73$ (E) · $73 - 13 = 60$ (D) · $51 - 23 = 28$ (R) · $61 - 31 = 30$ (A) · $66 - 32 = 34$ (I) · $28 - 1 = 27$ (C) · $30 - 1 = 29$ (Y) · $38 - 2 = 36$ (W) · $55 - 23 = 32$ (F)

Clue 3 (Place value): "THEY RAN FROM A LIFE UP HEART"

What number has 4 tens and 2 ones? = 42 (T) · What number has 6 tens and 4 ones? = 64 (Y) · What number has 8 tens and 6 ones? = 86 (I) · What number has 5 tens and 5 ones? = 55 (P) · What number has 1 ten and 1 one? = 11 (A) · What number has 1 ten and 6 ones? = 16 (M) · What number has 4 tens and 6 ones? = 46 (L) · What number has 3 tens and 7 ones? = 37 (F) · What number has 8 tens and 3 ones? = 83 (H) · What number has 6 tens and 0 ones? = 60 (N) · What number has 5 tens and 8 ones? = 58 (O) · What number has 2 tens and 6 ones? = 26 (R) · What number has 6 tens and 6 ones? = 66 (E) · What number has 8 tens and 4 ones? = 84 (U)

Clue 4 (Skip counting): "WE FOUND STRANDS OF BROWN HAIR"

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

Clue 5 (Missing addends): surviving statement is box 5 → Shy Guy

$8 + \underline{\quad} = 12 = 4$ · $5 + \underline{\quad} = 6 = 1$ · $8 + \underline{\quad} = 11 = 3$ · $10 + \underline{\quad} = 16 = 6$ · $3 + \underline{\quad} = 5 = 2$ · $1 + \underline{\quad} = 9 = 8$ · $5 + \underline{\quad} = 16 = 11$ · $5 + \underline{\quad} = 12 = 7$ · $9 + \underline{\quad} = 19 = 10$ · $1 + \underline{\quad} = 10 = 9$ · $9 + \underline{\quad} = 21 = 12$