



The Sky-Pirate Balloon Mystery

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

Detective: _____ Date: _____

The Golden Compass has been swiped from the Cloud Keeper's tower! A rogue sky-captain sneaked past the guards using weird flying gear. We must track down the culprit before they sail into the Storm Barrier.

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 rogue sky-captain is _____

Possible suspects

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

NAME	SHIP ENGINE	SPECIAL TOOL	STEERING HAND	HEADGEAR	MAJOR WEAKNESS
Viper Vic	Storm Engine	Spyglass Laser	Right-handed steering	Copper helmet	Citrus juice
Captain Caleb	Steam Propeller	Wind Whistle	Right-handed steering	Green aviator hat	Shiny mirrors
Uma	Solar Sails	Spyglass Laser	Right-handed steering	Blue bandanna	Loud whistles
Ned	Turbo Glider	Cloud Grapple	Right-handed steering	Green aviator hat	Shiny mirrors
Jack	Steam Propeller	Spyglass Laser	Right-handed steering	Blue bandanna	Loud whistles
Barnaby	Storm Engine	Net Launcher	Left-handed steering	Green aviator hat	Loud whistles
Indigo	Solar Sails	Cloud Grapple	Left-handed steering	Copper helmet	Loud whistles
Quillon	Steam Propeller	Wind Whistle	Left-handed steering	Green aviator hat	Shiny mirrors
Rusty	Gravity Anchor	Net Launcher	Right-handed steering	Green aviator hat	Shiny mirrors
Lucky Leo	Gravity Anchor	Cloud Grapple	Right-handed steering	Copper helmet	Loud whistles
Tucker	Storm Engine	Wind Whistle	Right-handed steering	Copper helmet	Loud whistles
Amelia	Steam Propeller	Wind Whistle	Right-handed steering	Copper helmet	Shiny mirrors
Grace	Gravity Anchor	Compass Magnet	Right-handed steering	Green aviator hat	Shiny mirrors
Flynn	Gravity Anchor	Wind Whistle	Right-handed steering	Blue bandanna	Citrus juice
Kid Koby	Solar Sails	Net Launcher	Left-handed steering	Green aviator hat	Citrus juice
Ellie	Steam Propeller	Wind Whistle	Right-handed steering	Green aviator hat	Citrus juice
Zack	Storm Engine	Net Launcher	Left-handed steering	Copper helmet	Shiny mirrors
Hudson	Steam Propeller	Net Launcher	Left-handed steering	Blue bandanna	Shiny mirrors
Otis	Steam Propeller	Spyglass Laser	Left-handed steering	Copper helmet	Citrus juice
Dusty	Solar Sails	Compass Magnet	Right-handed steering	Green aviator hat	Shiny mirrors
Wendy	Storm Engine	Compass Magnet	Left-handed steering	Copper helmet	Loud whistles

CLUE 1 Addition

We searched the docks for clue scraps. We added up the total cargo logs left behind by the runaway ships.

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

T						T												
6225	6044	4941	9787	5043	7550	4587	6225	4941	2651	2390	4941	4649	6118	2390	6225	2180	4649	4941

T					T								
6225	6044	4941	6118	4941	6225	3213	4587	2180	6118	5779	6044	4941	7550

$1882 + 4343 = \boxed{} \rightarrow \boxed{\text{T}}$

$1817 + 1396 = \boxed{} \rightarrow \boxed{\text{L}}$

$2880 + 3164 = \boxed{} \rightarrow \boxed{\text{H}}$

$4197 + 5590 = \boxed{} \rightarrow \boxed{\text{P}}$

$3853 + 1926 = \boxed{} \rightarrow \boxed{\text{C}}$

$3523 + 2595 = \boxed{} \rightarrow \boxed{\text{N}}$

$2235 + 2414 = \boxed{} \rightarrow \boxed{\text{S}}$

$2681 + 2260 = \boxed{} \rightarrow \boxed{\text{E}}$

$2024 + 2563 = \boxed{} \rightarrow \boxed{\text{A}}$

$3261 + 1782 = \boxed{} \rightarrow \boxed{\text{I}}$

$1227 + 953 = \boxed{} \rightarrow \boxed{\text{U}}$

$843 + 1547 = \boxed{} \rightarrow \boxed{\text{O}}$

$4122 + 3428 = \boxed{} \rightarrow \boxed{\text{R}}$

$1392 + 1259 = \boxed{} \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 2 Subtraction

The culprit dropped some map pieces during their escape. We subtracted the ruined pieces from the pile to find the rest.

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

T																		
1754	6383	7750	3141	8872	3141	3958	7169	5097	1754	6906	6383	7750	7750	3426	6906	2291	4770	
6383	7750	3426	6801	5097	8392	1754	6383	7750	6646	5097	2855	6383	1754	6383	2291	8392	6801	

$$2416 - 662 = \boxed{} \rightarrow \boxed{T}$$

$$10675 - 1803 = \boxed{} \rightarrow \boxed{O}$$

$$9395 - 1645 = \boxed{} \rightarrow \boxed{E}$$

$$10434 - 3265 = \boxed{} \rightarrow \boxed{P}$$

$$8997 - 2196 = \boxed{} \rightarrow \boxed{D}$$

$$4226 - 268 = \boxed{} \rightarrow \boxed{K}$$

$$9781 - 4684 = \boxed{} \rightarrow \boxed{I}$$

$$7458 - 812 = \boxed{} \rightarrow \boxed{R}$$

$$6926 - 20 = \boxed{} \rightarrow \boxed{W}$$

$$2980 - 125 = \boxed{} \rightarrow \boxed{G}$$

$$7435 - 4294 = \boxed{} \rightarrow \boxed{C}$$

$$12733 - 4341 = \boxed{} \rightarrow \boxed{N}$$

$$9741 - 4971 = \boxed{} \rightarrow \boxed{S}$$

$$3896 - 470 = \boxed{} \rightarrow \boxed{L}$$

$$10230 - 3847 = \boxed{} \rightarrow \boxed{H}$$

$$3331 - 1040 = \boxed{} \rightarrow \boxed{A}$$

Scratch space:

CLUE 3

Multiplication facts (1-12)

We spotted some crates stacked in neat rows on the launch pad. Multiplying the rows showed us exactly how many items were stolen.

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

T																		
9	22	44	56	15	33	63	110	44	90	44	90	5	22	33	63	63	44	110

T							T									
9	22	44	81	90	3	25	22	9	12	3	90	90	11	90	5	

$1 \times 9 = \square \rightarrow \boxed{\text{T}}$

$3 \times 5 = \square \rightarrow \boxed{\text{L}}$

$3 \times 11 = \square \rightarrow \boxed{\text{U}}$

$10 \times 9 = \square \rightarrow \boxed{\text{R}}$

$9 \times 9 = \square \rightarrow \boxed{\text{B}}$

$1 \times 3 = \square \rightarrow \boxed{\text{I}}$

$11 \times 4 = \square \rightarrow \boxed{\text{E}}$

$10 \times 11 = \square \rightarrow \boxed{\text{D}}$

$11 \times 2 = \square \rightarrow \boxed{\text{H}}$

$11 \times 1 = \square \rightarrow \boxed{\text{O}}$

$8 \times 7 = \square \rightarrow \boxed{\text{P}}$

$3 \times 4 = \square \rightarrow \boxed{\text{M}}$

$1 \times 5 = \square \rightarrow \boxed{\text{S}}$

$5 \times 5 = \square \rightarrow \boxed{\text{G}}$

$7 \times 9 = \square \rightarrow \boxed{\text{N}}$

Scratch space:

CLUE 4 Rounding

A broken radar screen flashed the escape ship's speed. The screen only shows numbers rounded to the nearest ten.

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

W												
110	130	290	50	20	2900	2000	3000	500	1700	130	130	2900

3000	700	1300	3000	900	50	1700	5000	3000	900	3000	900	900

30	170	130	2900	130

Round 111 to the nearest ten → **W**

Round 33 to the nearest ten → **S**

Round 166 to the nearest ten → **C**

Round 289 to the nearest ten → **F**

Round 886 to the nearest hundred → **T**

Round 2,815 to the nearest thousand → **A**

Round 500 to the nearest hundred → **G**

Round 1,756 to the nearest thousand → **D**

Round 1,688 to the nearest hundred → **R**

Round 49 to the nearest ten → **O**

Round 2,888 to the nearest hundred → **N**

Round 1,328 to the nearest hundred → **I**

Round 654 to the nearest hundred → **V**

Round 21 to the nearest ten → **U**

Round 132 to the nearest ten → **E**

Round 4,534 to the nearest thousand → **H**

Scratch space:

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

We cornered a deckhand who was dividing up stolen fuel canisters. Sharing them equally revealed the final path.

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:

$121 \div 11 = \boxed{}$

$100 \div 10 = \boxed{}$

$7 \div 7 = \boxed{}$

$36 \div 6 = \boxed{}$

$84 \div 12 = \boxed{}$

$72 \div 9 = \boxed{}$

$27 \div 3 = \boxed{}$

$8 \div 4 = \boxed{}$

$36 \div 9 = \boxed{}$

$24 \div 8 = \boxed{}$

$5 \div 1 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain dropped a heavy gravity anchor, then activated a strong compass magnet.
2. The villain unfurled the glowing solar sails, then fired a rusty cloud grapple.
3. The villain dropped a heavy gravity anchor, then shot a heavy net launcher.
4. The villain boosted off with a turbo glider, then blew a magic wind whistle.
5. The villain spun a whistling steam propeller, then activated a strong compass magnet.
6. The villain spun a whistling steam propeller, then fired a rusty cloud grapple.
7. The villain dropped a heavy gravity anchor, then shined a red spyglass laser.
8. The villain spun a whistling steam propeller, then shot a heavy net launcher.
9. The villain boosted off with a turbo glider, then shot a heavy net launcher.
10. The villain unfurled the glowing solar sails, then activated a strong compass magnet.
11. The villain boosted off with a turbo glider, then fired a rusty cloud grapple.
12. The villain spun a whistling steam propeller, then blew a magic wind whistle.

Answer Key

The Sky-Pirate Balloon Mystery

Culprit: Captain Caleb

Steam Propeller · Wind Whistle · Right-handed steering · Green aviator hat · Shiny mirrors

Trail: Start 21 → Clue 1 16 → Clue 2 12 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE PIRATE DOES NOT USE THE NET LAUNCHER"

$1882 + 4343 = 6225$ (T) · $1817 + 1396 = 3213$ (L) · $2880 + 3164 = 6044$ (H) · $4197 + 5590 = 9787$ (P) · $3853 + 1926 = 5779$ (C) · $3523 + 2595 = 6118$ (N) · $2235 + 2414 = 4649$ (S) · $2681 + 2260 = 4941$ (E) · $2024 + 2563 = 4587$ (A) · $3261 + 1782 = 5043$ (I) · $1227 + 953 = 2180$ (U) · $843 + 1547 = 2390$ (O) · $4122 + 3428 = 7550$ (R) · $1392 + 1259 = 2651$ (D)

Clue 2 (Subtraction): "THE COCKPIT WHEEL WAS HELD IN THE RIGHT HAND"

$2416 - 662 = 1754$ (T) · $10675 - 1803 = 8872$ (O) · $9395 - 1645 = 7750$ (E) · $10434 - 3265 = 7169$ (P) · $8997 - 2196 = 6801$ (D) · $4226 - 268 = 3958$ (K) · $9781 - 4684 = 5097$ (I) · $7458 - 812 = 6646$ (R) · $6926 - 20 = 6906$ (W) · $2980 - 125 = 2855$ (G) · $7435 - 4294 = 3141$ (C) · $12733 - 4341 = 8392$ (N) · $9741 - 4971 = 4770$ (S) · $3896 - 470 = 3426$ (L) · $10230 - 3847 = 6383$ (H) · $3331 - 1040 = 2291$ (A)

Clue 3 (Multiplication facts (1-12)): "THE PLUNDERER SHUNNED THE BRIGHT MIRRORS"

$1 \times 9 = 9$ (T) · $3 \times 5 = 15$ (L) · $3 \times 11 = 33$ (U) · $10 \times 9 = 90$ (R) · $9 \times 9 = 81$ (B) · $1 \times 3 = 3$ (I) · $11 \times 4 = 44$ (E) · $10 \times 11 = 110$ (D) · $11 \times 2 = 22$ (H) · $11 \times 1 = 11$ (O) · $8 \times 7 = 56$ (P) · $3 \times 4 = 12$ (M) · $1 \times 5 = 5$ (S) · $5 \times 5 = 25$ (G) · $7 \times 9 = 63$ (N)

Clue 4 (Rounding): "WE FOUND A GREEN AVIATOR HAT AT THE SCENE"

Round 111 to the nearest ten = 110 (W) · Round 33 to the nearest ten = 30 (S) · Round 166 to the nearest ten = 170 (C) · Round 289 to the nearest ten = 290 (F) · Round 886 to the nearest hundred = 900 (T) · Round 2,815 to the nearest thousand = 3000 (A) · Round 500 to the nearest hundred = 500 (G) · Round 1,756 to the nearest thousand = 2000 (D) · Round 1,688 to the nearest hundred = 1700 (R) · Round 49 to the nearest ten = 50 (O) · Round 2,888 to the nearest hundred = 2900 (N) · Round 1,328 to the nearest hundred = 1300 (I) · Round 654 to the nearest hundred = 700 (V) · Round 21 to the nearest ten = 20 (U) · Round 132 to the nearest ten = 130 (E) · Round 4,534 to the nearest thousand = 5000 (H)

Clue 5 (Division facts (1-12)): surviving statement is box 12 → Captain Caleb

$121 \div 11 = 11$ · $100 \div 10 = 10$ · $7 \div 7 = 1$ · $36 \div 6 = 6$ · $84 \div 12 = 7$ · $72 \div 9 = 8$ · $27 \div 3 = 9$ · $8 \div 4 = 2$ · $36 \div 9 = 4$ · $24 \div 8 = 3$ · $5 \div 1 = 5$