



Mystery of the Cloud Castle Sky Pirate

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

Detective: _____ **Date:** _____

Someone snuck into Cloud Castle Academy during the annual sky race and locked Headmaster Nimbus inside the trophy vault. The Sky Patrol squad needs your detective skills to decode the clues and catch the sneaky sky pirate.

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 Sky Pirate Captain is _____

Possible suspects

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

NAME	SKY GEAR	GLIDER TYPE	STEERING HAND	SCARF COLOR	DISTRACTION
Cadet Iris	Jet Boots	Feather Parachute	Left Handed	Sun Gold	Loud Whistles
Navigator Luke	Jet Boots	Twin Rotors	Left Handed	Bright Red	Fresh Pie
Cadet Owen	Smoke Grenade	Bat Kite	Right Handed	Deep Blue	Shiny Coins
Cadet Eli	Jet Boots	Feather Parachute	Left Handed	Bright Red	Fresh Pie
Pilot Max	Grappling Hook	Twin Rotors	Left Handed	Bright Red	Shiny Coins
Sky Captain Ben	Grappling Hook	Falcon Wings	Right Handed	Bright Red	Shiny Coins
Navigator Zoe	Smoke Grenade	Solar Sail	Left Handed	Bright Red	Shiny Coins
Navigator Hazel	Smoke Grenade	Bat Kite	Right Handed	Bright Red	Shiny Coins
Cadet Maya	Smoke Grenade	Bat Kite	Left Handed	Bright Red	Fresh Pie
Cadet Jade	Grappling Hook	Bat Kite	Left Handed	Bright Red	Shiny Coins
Cadet Leo	Wind Cannon	Solar Sail	Left Handed	Bright Red	Fresh Pie
Captain Rex	Wind Cannon	Feather Parachute	Right Handed	Bright Red	Fresh Pie
Cadet Ivy	Wind Cannon	Twin Rotors	Left Handed	Sun Gold	Loud Whistles
Pilot Cole	Jet Boots	Falcon Wings	Right Handed	Deep Blue	Loud Whistles
Pilot Sam	Jet Boots	Solar Sail	Left Handed	Bright Red	Fresh Pie
Pilot Ella	Grappling Hook	Bat Kite	Left Handed	Bright Red	Fresh Pie
Cadet Toby	Wind Cannon	Solar Sail	Left Handed	Bright Red	Loud Whistles
Captain Nora	Turbo Propeller	Bat Kite	Right Handed	Bright Red	Fresh Pie
Navigator Mia	Wind Cannon	Solar Sail	Left Handed	Sun Gold	Fresh Pie
Captain Dax	Grappling Hook	Twin Rotors	Left Handed	Deep Blue	Fresh Pie
Navigator Ava	Wind Cannon	Feather Parachute	Left Handed	Sun Gold	Loud Whistles

Multiplication facts (1-12)

Pilot Sam checks the cloud racer hangar where crates of gear are stacked in equal rows.

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

A 2x12 grid of boxes. The top row contains the following sequence: 'T' (orange), empty, empty, empty, empty, empty, empty, empty, empty, empty, 'T' (orange), empty, empty, empty, empty. The bottom row contains: empty, empty, 'T' (orange), empty, empty, empty, empty, empty, empty, empty, empty, empty, empty, empty. Below each box is a number. The top row numbers are: 63, 5, 2, 18, 48, 2, 84, 8, 81, 35, 20, 24, 84, 63, 2, 15, 96, 2, 18. The bottom row numbers are: 48, 96, 63, 16, 18, 2, 84, 18, 96, 21, 84, 24, 18, 84, 20, 21.

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

$6 \times 4 = \square \rightarrow \text{R}$

$8 \times 6 = \boxed{} \rightarrow \boxed{\text{N}}$

$5 \times 7 = \square \rightarrow \boxed{\text{P}}$

$2 \times 1 = \square \rightarrow \boxed{\mathbf{E}}$

$4 \times 5 = \boxed{} \rightarrow \boxed{1}$

$2 \times 8 = \boxed{} \rightarrow \boxed{\text{U}}$

$9 \times 9 = \boxed{} \rightarrow \boxed{\text{Y}}$

$5 \times 3 = \square \rightarrow \boxed{\mathbf{D}}$

$12 \times 8 = \square \rightarrow \square$

$2 \times 4 = \square \rightarrow \mathbf{K}$

$6 \times 3 = \square \rightarrow \mathbf{S}$

$3 \times 7 = \square \rightarrow \boxed{\text{L}}$

$12 \times 7 = \square \rightarrow \mathbf{A}$

$1 \times 5 = \square \rightarrow \text{H}$

Scratch space:

CLUE 2
Rounding

Cadet Maya looks at the sky radar screen which rounds all distance numbers to the nearest ten.

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

T									T		T						
290	1700	50	430	70	430	1100	50	900	290	430	290	50	50	7000	430		
					T							T					
70	430	2300	200	170	290	1700	50	2300	7000	4300	50	500	290	1700	370	200	2900

Round 293 to the nearest ten →

T

Round 174 to the nearest ten →

G

Round 1,728 to the nearest hundred →

H

Round 72 to the nearest ten →

U

Round 1,077 to the nearest hundred →

P

Round 432 to the nearest ten →

S

Round 197 to the nearest hundred →

N

Round 539 to the nearest hundred →

F

Round 2,880 to the nearest hundred →

D

Round 4,292 to the nearest hundred →

L

Round 53 to the nearest ten →

E

Round 370 to the nearest ten →

A

Round 2,302 to the nearest hundred →

I

Round 7,311 to the nearest thousand →

R

Round 898 to the nearest hundred →

C

Scratch space:

CLUE 3 Addition

Navigator Zoe totals up all the found storm crystals in the sky lockbox.

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

T									T					
7272	2580	4980	8648	5153	8648	3321	4980	2155	7272	2155	6755	2460	9885	4980

T									T									
7272	3327	8410	2155	8643	4980	7639	9383	8410	7272	2580	2099	3327	4980	8648	2580	3321	8410	4980

$4860 + 2412 = \square \rightarrow$ T	$4127 + 5256 = \square \rightarrow$ W	$5153 + 2486 = \square \rightarrow$ D
$1523 + 1057 = \square \rightarrow$ H	$2315 + 2838 = \square \rightarrow$ U	$3879 + 4531 = \square \rightarrow$ I
$1386 + 713 = \square \rightarrow$ F	$1689 + 3291 = \square \rightarrow$ E	$1214 + 2113 = \square \rightarrow$ R
$3662 + 4981 = \square \rightarrow$ K	$1353 + 802 = \square \rightarrow$ C	$6628 + 3257 = \square \rightarrow$ B
$837 + 1623 = \square \rightarrow$ N	$3675 + 4973 = \square \rightarrow$ S	$1888 + 1433 = \square \rightarrow$ P
$3368 + 3387 = \square \rightarrow$ A		

Scratch space:

CLUE 4

Subtraction

Captain Dax calculates how many wind compasses remain after the pirate raid.

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

A											A				A		
1610	3078	3587	7819	6003	6613	5502	3587	8279	6837	6648	1734	1610	3587	7950	4762	1610	6648

											A				
6837	3587	2057	2871	2871	8279	6837	3078	3659	5502	6613	8279	6648	1610	7950	8279

$2570 - 960 = \square \rightarrow \text{A}$

$6187 - 3109 = \square \rightarrow \text{B}$

$12134 - 3855 = \square \rightarrow \text{E}$

$8424 - 4765 = \square \rightarrow \text{Y}$

$10938 - 4325 = \square \rightarrow \text{H}$

$6475 - 4741 = \square \rightarrow \text{C}$

$9702 - 1752 = \square \rightarrow \text{F}$

$9168 - 3165 = \square \rightarrow \text{G}$

$5028 - 1441 = \square \rightarrow \text{R}$

$9577 - 4815 = \square \rightarrow \text{W}$

$6323 - 3452 = \square \rightarrow \text{P}$

$12704 - 4885 = \square \rightarrow \text{I}$

$10452 - 3804 = \square \rightarrow \text{S}$

$4106 - 2049 = \square \rightarrow \text{O}$

$10987 - 4150 = \square \rightarrow \text{D}$

$8599 - 3097 = \square \rightarrow \text{T}$

Scratch space:

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

Cadet Kai splits the cloud snacks evenly among the patrol squad members.

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:

$110 \div 10 = \boxed{}$

$60 \div 5 = \boxed{}$

$16 \div 2 = \boxed{}$

$20 \div 10 = \boxed{}$

$12 \div 12 = \boxed{}$

$24 \div 6 = \boxed{}$

$30 \div 5 = \boxed{}$

$63 \div 7 = \boxed{}$

$30 \div 10 = \boxed{}$

$90 \div 9 = \boxed{}$

$42 \div 6 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain blasted a wind cannon, then sailed on a solar sail.
2. The villain fired a grappling hook, then drifted on a feather parachute.
3. The villain blasted a wind cannon, then soared on falcon wings.
4. The villain spun a turbo propeller, then sailed on a solar sail.
5. The villain boosted with jet boots, then hovered on twin rotors.
6. The villain dropped a smoke grenade, then sailed on a solar sail.
7. The villain spun a turbo propeller, then soared on falcon wings.
8. The villain dropped a smoke grenade, then glided on a bat kite.
9. The villain boosted with jet boots, then glided on a bat kite.
10. The villain blasted a wind cannon, then glided on a bat kite.
11. The villain fired a grappling hook, then glided on a bat kite.
12. The villain boosted with jet boots, then drifted on a feather parachute.

Answer Key

Mystery of the Cloud Castle Sky Pirate

Culprit: Navigator Luke

Jet Boots · Twin Rotors · Left Handed · Bright Red · Fresh Pie

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SNEAKY PIRATE DOES NOT USE A SOLAR SAIL"

$7 \times 9 = 63$ (T) · $6 \times 4 = 24$ (R) · $8 \times 6 = 48$ (N) · $5 \times 7 = 35$ (P) · $2 \times 1 = 2$ (E) · $4 \times 5 = 20$ (I) · $2 \times 8 = 16$ (U) · $9 \times 9 = 81$ (Y) · $5 \times 3 = 15$ (D) · $12 \times 8 = 96$ (O) · $2 \times 4 = 8$ (K) · $6 \times 3 = 18$ (S) · $3 \times 7 = 21$ (L) · $12 \times 7 = 84$ (A) · $1 \times 5 = 5$ (H)

Clue 2 (Rounding): "THE SUSPECT STEERS USING THEIR LEFT HAND"

Round 293 to the nearest ten = 290 (T) · Round 174 to the nearest ten = 170 (G) · Round 1,728 to the nearest hundred = 1700 (H) · Round 72 to the nearest ten = 70 (U) · Round 1,077 to the nearest hundred = 1100 (P) · Round 432 to the nearest ten = 430 (S) · Round 197 to the nearest hundred = 200 (N) · Round 539 to the nearest hundred = 500 (F) · Round 2,880 to the nearest hundred = 2900 (D) · Round 4,292 to the nearest hundred = 4300 (L) · Round 53 to the nearest ten = 50 (E) · Round 370 to the nearest ten = 370 (A) · Round 2,302 to the nearest hundred = 2300 (I) · Round 7,311 to the nearest thousand = 7000 (R) · Round 898 to the nearest hundred = 900 (C)

Clue 3 (Addition): "THE SUSPECT CAN BE TRICKED WITH FRESH PIE"

$4860 + 2412 = 7272$ (T) · $4127 + 5256 = 9383$ (W) · $5153 + 2486 = 7639$ (D) · $1523 + 1057 = 2580$ (H) · $2315 + 2838 = 5153$ (U) · $3879 + 4531 = 8410$ (I) · $1386 + 713 = 2099$ (F) · $1689 + 3291 = 4980$ (E) · $1214 + 2113 = 3327$ (R) · $3662 + 4981 = 8643$ (K) · $1353 + 802 = 2155$ (C) · $6628 + 3257 = 9885$ (B) · $837 + 1623 = 2460$ (N) · $3675 + 4973 = 8648$ (S) · $1888 + 1433 = 3321$ (P) · $3368 + 3387 = 6755$ (A)

Clue 4 (Subtraction): "A BRIGHT RED SCARF WAS DROPPED BY THE SAFE"

$2570 - 960 = 1610$ (A) · $6187 - 3109 = 3078$ (B) · $12134 - 3855 = 8279$ (E) · $8424 - 4765 = 3659$ (Y) · $10938 - 4325 = 6613$ (H) · $6475 - 4741 = 1734$ (C) · $9702 - 1752 = 7950$ (F) · $9168 - 3165 = 6003$ (G) · $5028 - 1441 = 3587$ (R) · $9577 - 4815 = 4762$ (W) · $6323 - 3452 = 2871$ (P) · $12704 - 4885 = 7819$ (I) · $10452 - 3804 = 6648$ (S) · $4106 - 2049 = 2057$ (O) · $10987 - 4150 = 6837$ (D) · $8599 - 3097 = 5502$ (T)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Navigator Luke

$110 \div 10 = 11$ · $60 \div 5 = 12$ · $16 \div 2 = 8$ · $20 \div 10 = 2$ · $12 \div 12 = 1$ · $24 \div 6 = 4$ · $30 \div 5 = 6$ · $63 \div 7 = 9$ · $30 \div 10 = 3$ · $90 \div 9 = 10$ · $42 \div 6 = 7$