The Cloudtop Citadel Mystery

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

Detective: _____ **Date:** _____

Someone snuck into the Cloudtop Citadel tower and snatched the Golden Star Map! Use your math skills and evidence to find 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.

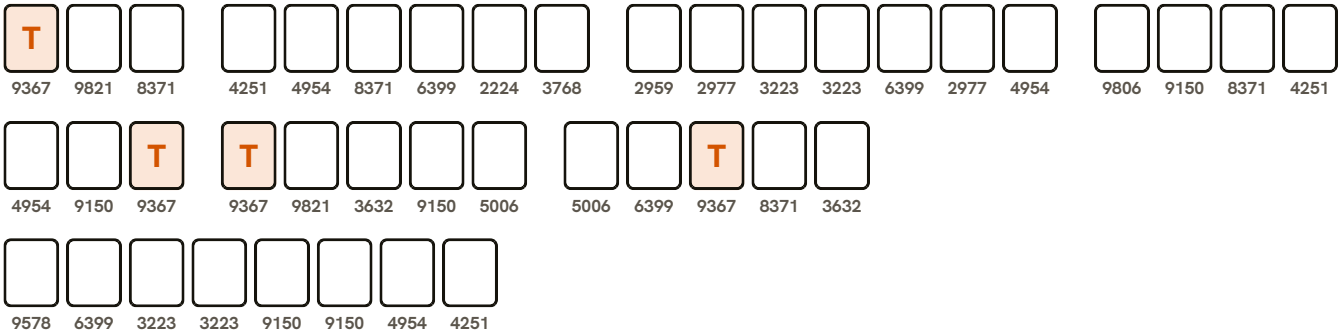
NAME	SKY GEAR	TRICKY MOVE	DOMINANT HAND	HAIR COLOR	DEFENSE GADGET
Zephyr Vance	Radar Goggles	Stuns with Flash	Left Handed	Bright Red	Loud Whistle
Nova Stratus	Glider Wings	Spins Whirlwinds	Left Handed	Deep Black	Sticky Foam
Maya Gust	Radar Goggles	Sounds Air Horn	Left Handed	Deep Black	Loud Whistle
Iris Nimbus	Smoke Bombs	Drops Net Traps	Right Handed	Golden Yellow	Sticky Foam
Barnaby Cloud	Grappling Hook	Sounds Air Horn	Right Handed	Bright Red	Loud Whistle
Leo Skylark	Radar Goggles	Sounds Air Horn	Left Handed	Deep Black	Sticky Foam
Tess Glider	Radar Goggles	Throws Water Balloons	Left Handed	Deep Black	Bright Flashlight
Astra Starling	Radar Goggles	Sounds Air Horn	Right Handed	Bright Red	Loud Whistle
Milo Horizon	Radar Goggles	Drops Net Traps	Left Handed	Bright Red	Loud Whistle
Otis Aviator	Radar Goggles	Sounds Air Horn	Right Handed	Bright Red	Sticky Foam
Ruby Radar	Smoke Bombs	Drops Net Traps	Right Handed	Bright Red	Sticky Foam
Toby Tempest	Glider Wings	Sounds Air Horn	Left Handed	Deep Black	Loud Whistle
Captain Orion	Glider Wings	Stuns with Flash	Right Handed	Deep Black	Loud Whistle
Felix Falcon	Grappling Hook	Sounds Air Horn	Right Handed	Bright Red	Sticky Foam
Sammy Squall	Radar Goggles	Spins Whirlwinds	Right Handed	Bright Red	Loud Whistle
Luna Aero	Smoke Bombs	Drops Net Traps	Left Handed	Bright Red	Sticky Foam
Finn Soar	Radar Goggles	Drops Net Traps	Right Handed	Deep Black	Sticky Foam
Rowan Drift	Grappling Hook	Spins Whirlwinds	Left Handed	Golden Yellow	Loud Whistle
Hazel Breeze	Grappling Hook	Throws Water Balloons	Right Handed	Bright Red	Loud Whistle
Skye Walker	Smoke Bombs	Stuns with Flash	Right Handed	Bright Red	Loud Whistle
Piper Gale	Glider Wings	Stuns with Flash	Right Handed	Bright Red	Sticky Foam

make your own at mathcrackers.com

CLUE 1 Addition

To find the clue code, Cadet Sam counted all the spare propeller blades stored in the two sky cargo bays.

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



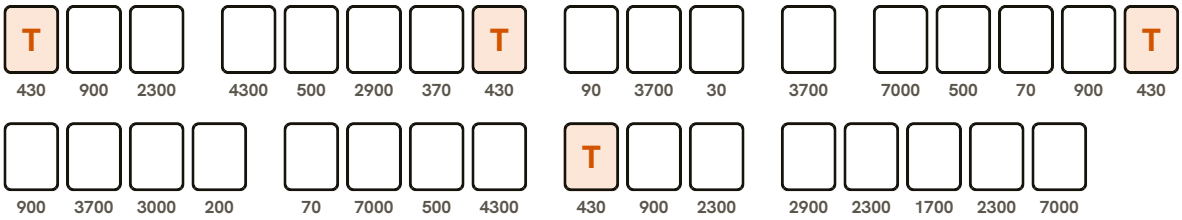
4206 + 5161 = ☐ → T	1206 + 2562 = ☐ → Y	2804 + 5567 = ☐ → E
6357 + 3464 = ☐ → H	2403 + 1848 = ☐ → S	1562 + 1397 = ☐ → V
3925 + 2474 = ☐ → A	2265 + 1367 = ☐ → R	1126 + 1851 = ☐ → I
2080 + 1143 = ☐ → L	3127 + 1879 = ☐ → W	5477 + 4329 = ☐ → D
3020 + 6130 = ☐ → O	2386 + 2568 = ☐ → N	894 + 1330 = ☐ → K
5803 + 3775 = ☐ → B		

Scratch space:

CLUE 2 Rounding

> The cloud radar screen only showed rounded numbers, so Navigator Skye rounded the distance to decode the signal.

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



Round 430 to the nearest ten ☐ → T

Round 2,296 to the nearest hundred ☐ → E

Round 247 to the nearest hundred ☐ → D

Round 90 to the nearest ten ☐ → S

Round 7,249 to the nearest thousand ☐ → R

Round 897 to the nearest hundred ☐ → H

Round 527 to the nearest hundred ☐ → I

Round 4,311 to the nearest hundred ☐ → P

Round 374 to the nearest ten ☐ → O

Round 3,693 to the nearest hundred ☐ → A

Round 33 to the nearest ten ☐ → W

Round 2,878 to the nearest thousand ☐ → N

Round 73 to the nearest ten ☐ → G

Round 2,883 to the nearest hundred ☐ → L

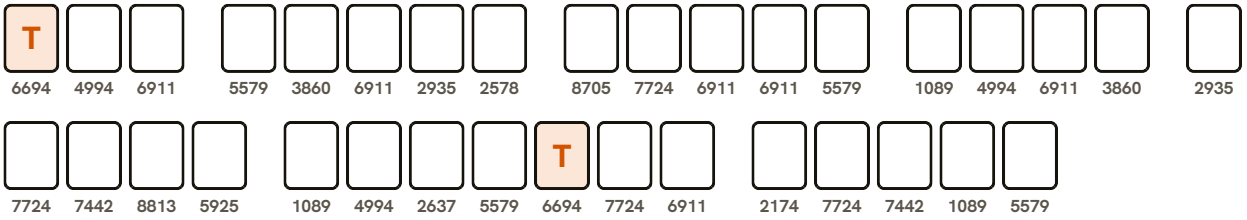
Round 1,714 to the nearest hundred ☐ → V

Scratch space:

CLUE 3 Subtraction

Officer Barnaby subtracted the damaged sky maps from the total deck supplies to reveal the next note.

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



9414 - 2720 = ☐ → T

9462 - 2020 = ☐ → O

6245 - 1251 = ☐ → H

3293 - 2204 = ☐ → W

12816 - 4003 = ☐ → U

7285 - 1706 = ☐ → S

10015 - 3104 = ☐ → E

6826 - 4652 = ☐ → B

8383 - 2458 = ☐ → D

7915 - 191 = ☐ → L

3648 - 1011 = ☐ → I

3651 - 1073 = ☐ → K

4258 - 1323 = ☐ → A

8825 - 4965 = ☐ → N

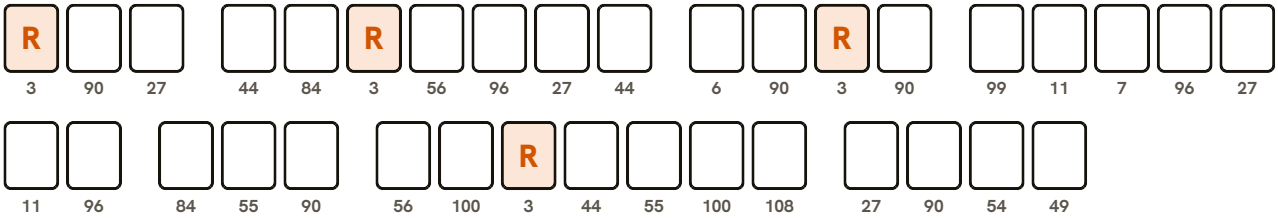
11572 - 2867 = ☐ → F

Scratch space:

CLUE 4 Multiplication facts (1-12)

> Cadet Piper lined up four rows of compasses to calculate the grid code needed for the clue.

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



1 × 3 = ☐ → R	3 × 9 = ☐ → D	9 × 12 = ☐ → P
9 × 10 = ☐ → E	7 × 1 = ☐ → U	12 × 8 = ☐ → N
11 × 4 = ☐ → S	7 × 12 = ☐ → T	1 × 6 = ☐ → W
7 × 7 = ☐ → K	9 × 6 = ☐ → C	10 × 10 = ☐ → I
5 × 11 = ☐ → H	1 × 11 = ☐ → O	8 × 7 = ☐ → A
9 × 11 = ☐ → F		

Scratch space:

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

> Pilot Zephyr split the emergency rescue ropes evenly among the airship stations to unmask the final hint.

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:

6 ÷ 3 = ☐	100 ÷ 10 = ☐	6 ÷ 1 = ☐	24 ÷ 2 = ☐	55 ÷ 11 = ☐
7 ÷ 1 = ☐	11 ÷ 11 = ☐	12 ÷ 4 = ☐	99 ÷ 9 = ☐	36 ÷ 4 = ☐
32 ÷ 4 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain creates a thick smoke cloud, then blares a loud air horn.
2. The villain spots targets with radar goggles, then spins quick whirlwinds around.
3. The villain zooms past on jet boots, then spins quick whirlwinds around.
4. The villain swings on a grappling hook, then blares a loud air horn.
5. The villain spots targets with radar goggles, then throws cold water balloons.
6. The villain creates a thick smoke cloud, then stuns guards with a bright flash.
7. The villain creates a thick smoke cloud, then drops heavy net traps on the deck.
8. The villain swings on a grappling hook, then throws cold water balloons.
9. The villain zooms past on jet boots, then stuns guards with a bright flash.
10. The villain spots targets with radar goggles, then blares a loud air horn.
11. The villain glides across the sky, then blares a loud air horn.
12. The villain glides across the sky, then stuns guards with a bright flash.

TEACHER / PARENT

Answer Key

The Cloudtop Citadel Mystery

Culprit: Barnaby Cloud

Grappling Hook · Sounds Air Horn · Right Handed · Bright Red · Loud Whistle

Trail: Start 21 → Clue 1 19 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SNEAKY VILLAIN DOES NOT THROW WATER BALLOONS"

4206 + 5161 = 9367 (T) · 1206 + 2562 = 3768 (Y) · 2804 + 5567 = 8371 (E) · 6357 + 3464 = 9821 (H) · 2403 + 1848 = 4251 (S) · 1562 + 1397 = 2959 (V) · 3925 + 2474 = 6399 (A) · 2265 + 1367 = 3632 (R) · 1126 + 1851 = 2977 (I) · 2080 + 1143 = 3223 (L) · 3127 + 1879 = 5006 (W) · 5477 + 4329 = 9806 (D) · 3020 + 6130 = 9150 (O) · 2386 + 2568 = 4954 (N) · 894 + 1330 = 2224 (K) · 5803 + 3775 = 9578 (B)

Clue 2 (Rounding): "THE PILOT SAW A RIGHT HAND GRIP THE LEVER"

Round 430 to the nearest ten = 430 (T) · Round 2,296 to the nearest hundred = 2300 (E) · Round 247 to the nearest hundred = 200 (D) · Round 90 to the nearest ten = 90 (S) · Round 7,249 to the nearest thousand = 7000 (R) · Round 897 to the nearest hundred = 900 (H) · Round 527 to the nearest hundred = 500 (I) · Round 4,311 to the nearest hundred = 4300 (P) · Round 374 to the nearest ten = 370 (O) · Round 3,693 to the nearest hundred = 3700 (A) · Round 33 to the nearest ten = 30 (W) · Round 2,878 to the nearest thousand = 3000 (N) · Round 73 to the nearest ten = 70 (G) · Round 2,883 to the nearest hundred = 2900 (L) · Round 1,714 to the nearest hundred = 1700 (V)

Clue 3 (Subtraction): "THE SNEAK FLEES WHEN A LOUD WHISTLE BLOWS"

9414 - 2720 = 6694 (T) · 9462 - 2020 = 7442 (O) · 6245 - 1251 = 4994 (H) · 3293 - 2204 = 1089 (W) · 12816 - 4003 = 8813 (U) · 7285 - 1706 = 5579 (S) · 10015 - 3104 = 6911 (E) · 6826 - 4652 = 2174 (B) · 8383 - 2458 = 5925 (D) · 7915 - 191 = 7724 (L) · 3648 - 1011 = 2637 (I) · 3651 - 1073 = 2578 (K) · 4258 - 1323 = 2935 (A) · 8825 - 4965 = 3860 (N) · 11572 - 2867 = 8705 (F)

Clue 4 (Multiplication facts (1-12)): "RED STRANDS WERE FOUND ON THE AIRSHIP DECK"

1 × 3 = 3 (R) · 3 × 9 = 27 (D) · 9 × 12 = 108 (P) · 9 × 10 = 90 (E) · 7 × 1 = 7 (U) · 12 × 8 = 96 (N) · 11 × 4 = 44 (S) · 7 × 12 = 84 (T) · 1 × 6 = 6 (W) · 7 × 7 = 49 (K) · 9 × 6 = 54 (C) · 10 × 10 = 100 (I) · 5 × 11 = 55 (H) · 1 × 11 = 11 (O) · 8 × 7 = 56 (A) · 9 × 11 = 99 (F)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Barnaby Cloud

6 ÷ 3 = 2 · 100 ÷ 10 = 10 · 6 ÷ 1 = 6 · 24 ÷ 2 = 12 · 55 ÷ 11 = 5 · 7 ÷ 1 = 7 · 11 ÷ 11 = 1 · 12 ÷ 4 = 3 · 99 ÷ 9 = 11 · 36 ÷ 4 = 9 · 32 ÷ 4 = 8