The Skydock Mystery

Grade 7 math · Multiplication, Multi-step word problems, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

A mystery villain raided the main airship station and swiped the golden star compass! The Head Navigator needs your help to decode clues and track down the culprit.

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 Cloud Bandit is _____

Possible suspects

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

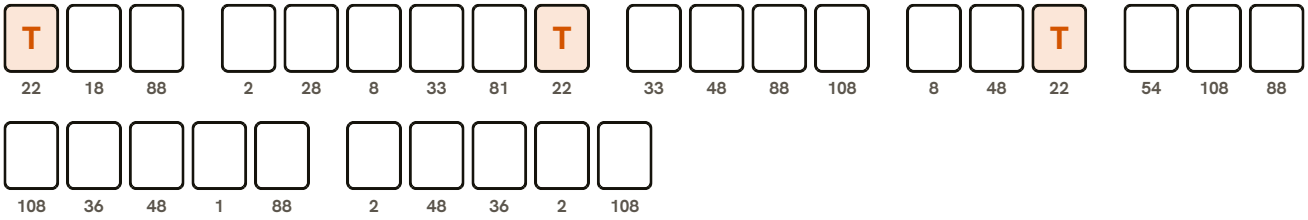
NAME	SKY SKILL	GEAR PIECE	GRIP STYLE	HAIR STYLE	WEAKNESS
Radar Ruby	Lightning Dash	Grappling Hook	Left-handed grip	Black Spiky Hair	Bright Flares
Aviator Asher	Lightning Dash	Smoke Bombs	Left-handed grip	Silver Goggles Straps	Strong Gusts
Pilot Piper	Lightning Dash	Grappling Hook	Right-handed grip	Black Spiky Hair	Bright Flares
Skyhand Sierra	Lightning Dash	Grappling Hook	Left-handed grip	Braided Red Locks	Strong Gusts
Commander Cora	Wind Blast	Telescope Goggles	Right-handed grip	Braided Red Locks	Bright Flares
Captain Barnaby	Lightning Dash	Glider Wings	Left-handed grip	Braided Red Locks	Strong Gusts
Lookout Luna	Lightning Dash	Compass Charm	Right-handed grip	Braided Red Locks	Strong Gusts
Cadet Caleb	Sonic Whistle	Glider Wings	Right-handed grip	Black Spiky Hair	Loud Foghorns
Ranger Reese	Wind Blast	Smoke Bombs	Right-handed grip	Black Spiky Hair	Bright Flares
Officer Olivia	Cloud Camouflage	Grappling Hook	Left-handed grip	Black Spiky Hair	Loud Foghorns
Scout Sterling	Lightning Dash	Telescope Goggles	Right-handed grip	Braided Red Locks	Strong Gusts
Flyer Finn	Sonic Whistle	Telescope Goggles	Left-handed grip	Black Spiky Hair	Strong Gusts
Aviator Axel	Sonic Whistle	Compass Charm	Left-handed grip	Black Spiky Hair	Strong Gusts
Captain Casper	Lightning Dash	Glider Wings	Right-handed grip	Black Spiky Hair	Loud Foghorns
Engineer Ethan	Wind Blast	Compass Charm	Left-handed grip	Black Spiky Hair	Strong Gusts
Chief Chloe	Lightning Dash	Smoke Bombs	Left-handed grip	Black Spiky Hair	Strong Gusts
Navigator Nora	Gravity Flip	Telescope Goggles	Right-handed grip	Black Spiky Hair	Strong Gusts
Mechanic Milo	Gravity Flip	Telescope Goggles	Left-handed grip	Black Spiky Hair	Strong Gusts
Navigator Nova	Cloud Camouflage	Smoke Bombs	Left-handed grip	Black Spiky Hair	Bright Flares
Pilot Parker	Wind Blast	Telescope Goggles	Left-handed grip	Black Spiky Hair	Loud Foghorns
Signal Sadie	Gravity Flip	Smoke Bombs	Right-handed grip	Silver Goggles Straps	Strong Gusts

make your own at mathcrackers.com

CLUE 1 Multiplication facts (1-12)

You examine the messy airship logs to calculate the total fuel supplies.

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



2 × 11 = ☐ → T

3 × 11 = ☐ → D

12 × 4 = ☐ → O

1 × 8 = ☐ → N

9 × 2 = ☐ → H

9 × 4 = ☐ → M

12 × 9 = ☐ → S

9 × 9 = ☐ → I

8 × 11 = ☐ → E

1 × 2 = ☐ → B

6 × 9 = ☐ → U

1 × 1 = ☐ → K

4 × 7 = ☐ → A

Scratch space:

CLUE 2 Multi-step word problems

The engine technician counts rows of glowing sky crystals on the storage rack.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was

L							D		D	G	R	I	P	.
	65	39	81	16	60	29	43		39					

There were 136 wind lanterns in all. 6 wind lanterns were set aside. The rest were shared equally among 2 Archipelago Guard. How many wind lanterns did each get?

Answer: ☐ → **L**

Sky Cadet collected 405 sky crystals in the morning and 81 sky crystals in the afternoon, then split them equally among 6 Archipelago Guard. How many sky crystals did each get?

Answer: ☐ → **F**

There were 65 brass compasses in all. 3 Archipelago Guard used 11 brass compasses each. The other 2 Archipelago Guard shared the rest equally. How many brass compasses did each of the other Archipelago Guard get?

Answer: ☐ → **T**

There were 548 brass compasses in all. 8 brass compasses were set aside. The rest were shared equally among 9 Archipelago Guard. How many brass compasses did each get?

Answer: ☐ → **H**

There were 202 wind lanterns in all. 2 Archipelago Guard used 23 wind lanterns each. The other 4 Archipelago Guard shared the rest equally. How many wind lanterns did each of the other Archipelago Guard get?

Answer: ☐ → **E**

Sky Cadet earned 2 wind lanterns in each of 3 rounds, plus 25 bonus wind lanterns. Then 2 wind lanterns were lost. How many wind lanterns are left?

Answer: ☐ → **A**

Sky Cadet earned 2 glider packs in each of 4 rounds, plus 44 bonus glider packs. Then 9 glider packs were lost. How many glider packs are left?

Answer: ☐ → **N**

Scratch space:

CLUE 3

Addition

You gather dropped gear pieces around the deck to tally the evidence.

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



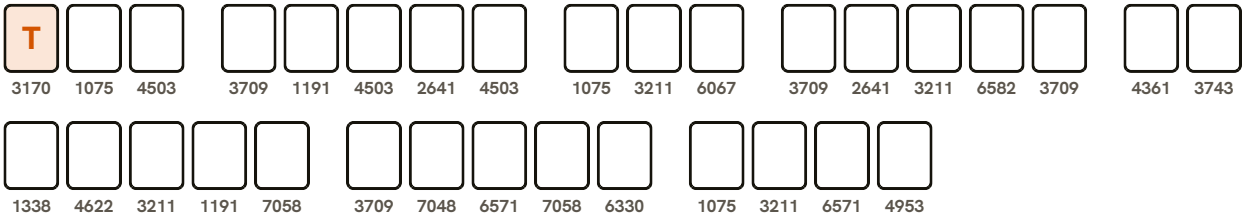
1961 + 1203 = ☐ → T	914 + 1103 = ☐ → B	5899 + 3384 = ☐ → Y
4236 + 3012 = ☐ → E	5130 + 2495 = ☐ → R	3124 + 3016 = ☐ → G
2902 + 1632 = ☐ → F	2970 + 1775 = ☐ → N	3350 + 4187 = ☐ → O
4339 + 2354 = ☐ → S	1018 + 2304 = ☐ → U	3459 + 4128 = ☐ → D
2991 + 1376 = ☐ → H	3106 + 2566 = ☐ → W	1724 + 2521 = ☐ → P
1743 + 3325 = ☐ → I	5148 + 4067 = ☐ → A	

Scratch space:

CLUE 4 Subtraction

The navigator compares remaining map pages to find what was stolen.

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



3550 - 380 = ☐ → T	5321 - 1578 = ☐ → F	9627 - 2569 = ☐ → K
7153 - 3942 = ☐ → A	8462 - 1414 = ☐ → P	4642 - 139 = ☐ → E
10988 - 4658 = ☐ → Y	4375 - 1734 = ☐ → N	4882 - 3807 = ☐ → H
10903 - 4836 = ☐ → D	6901 - 319 = ☐ → G	8980 - 4358 = ☐ → L
5117 - 164 = ☐ → R	3808 - 2617 = ☐ → C	6360 - 2651 = ☐ → S
2097 - 759 = ☐ → B	8013 - 1442 = ☐ → I	8804 - 4443 = ☐ → O

Scratch space:

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

> You divide the sky patrol fleet into balanced search squads across the islands.

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:

16 ÷ 4 = ☐	40 ÷ 8 = ☐	24 ÷ 4 = ☐	14 ÷ 2 = ☐	72 ÷ 9 = ☐
20 ÷ 2 = ☐	1 ÷ 1 = ☐	90 ÷ 10 = ☐	2 ÷ 1 = ☐	12 ÷ 4 = ☐
121 ÷ 11 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain blew away the guard rails, then vanished into thin air.
2. The villain zapped the main engine room, then spotted the escape route.
3. The villain zapped the main engine room, then steered through the storm.
4. The villain flipped the ship upside down, then spotted the escape route.
5. The villain shattered the tower glass, then spotted the escape route.
6. The villain shattered the tower glass, then steered through the storm.
7. The villain flipped the ship upside down, then soared past the watchtower.
8. The villain blew away the guard rails, then hooked the treasure chest.
9. The villain shattered the tower glass, then soared past the watchtower.
10. The villain flipped the ship upside down, then hooked the treasure chest.
11. The villain flipped the ship upside down, then vanished into thin air.
12. The villain blew away the guard rails, then steered through the storm.

TEACHER / PARENT

Answer Key

The Skydock Mystery

Culprit: Engineer Ethan

Wind Blast · Compass Charm · Left-handed grip · Black Spiky Hair · Strong Gusts

Trail: Start 21 → Clue 1 16 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE BANDIT DOES NOT USE SMOKE BOMBS"

2 × 11 = 22 (T) · 3 × 11 = 33 (D) · 12 × 4 = 48 (O) · 1 × 8 = 8 (N) · 9 × 2 = 18 (H) · 9 × 4 = 36 (M) · 12 × 9 = 108 (S) · 9 × 9 = 81 (I) · 8 × 11 = 88 (E) · 1 × 2 = 2 (B) · 6 × 9 = 54 (U) · 1 × 1 = 1 (K) · 4 × 7 = 28 (A)

Clue 2 (Multi-step word problems): "LEFT HANDED GRIP"

There were 136 wind lanterns in all. 6 wind lanterns were set aside. The rest were shared equally among 2 Archipelago Guard. How many wind lanterns did each get? = 65 (L) · Sky Cadet collected 405 sky crystals in the morning and 81 sky crystals in the afternoon, then split them equally among 6 Archipelago Guard. How many sky crystals did each get? = 81 (F) · There were 65 brass compasses in all. 3 Archipelago Guard used 11 brass compasses each. The other 2 Archipelago Guard shared the rest equally. How many brass compasses did each of the other Archipelago Guard get? = 16 (T) · There were 548 brass compasses in all. 8 brass compasses were set aside. The rest were shared equally among 9 Archipelago Guard. How many brass compasses did each get? = 60 (H) · There were 202 wind lanterns in all. 2 Archipelago Guard used 23 wind lanterns each. The other 4 Archipelago Guard shared the rest equally. How many wind lanterns did each of the other Archipelago Guard get? = 39 (E) · Sky Cadet earned 2 wind lanterns in each of 3 rounds, plus 25 bonus wind lanterns. Then 2 wind lanterns were lost. How many wind lanterns are left? = 29 (A) · Sky Cadet earned 2 glider packs in each of 4 rounds, plus 44 bonus glider packs. Then 9 glider packs were lost. How many glider packs are left? = 43 (N)

Clue 3 (Addition): "THE THIEF WAS DROPPED BY STRONG GUSTS"

1961 + 1203 = 3164 (T) · 914 + 1103 = 2017 (B) · 5899 + 3384 = 9283 (Y) · 4236 + 3012 = 7248 (E) · 5130 + 2495 = 7625 (R) · 3124 + 3016 = 6140 (G) · 2902 + 1632 = 4534 (F) · 2970 + 1775 = 4745 (N) · 3350 + 4187 = 7537 (O) · 4339 + 2354 = 6693 (S) · 1018 + 2304 = 3322 (U) · 3459 + 4128 = 7587 (D) · 2991 + 1376 = 4367 (H) · 3106 + 2566 = 5672 (W) · 1724 + 2521 = 4245 (P) · 1743 + 3325 = 5068 (I) · 5148 + 4067 = 9215 (A)

Clue 4 (Subtraction): "THE SCENE HAD SNAGS OF BLACK SPIKY HAIR"

3550 - 380 = 3170 (T) · 5321 - 1578 = 3743 (F) · 9627 - 2569 = 7058 (K) · 7153 - 3942 = 3211 (A) · 8462 - 1414 = 7048 (P) · 4642 - 139 = 4503 (E) · 10988 - 4658 = 6330 (Y) · 4375 - 1734 = 2641 (N) · 4882 - 3807 = 1075 (H) · 10903 - 4836 = 6067 (D) · 6901 - 319 = 6582 (G) · 8980 - 4358 = 4622 (L) · 5117 - 164 = 4953 (R) · 3808 - 2617 = 1191 (C) · 6360 - 2651 = 3709 (S) · 2097 - 759 = 1338 (B) · 8013 - 1442 = 6571 (I) · 8804 - 4443 = 4361 (O)

Clue 5 (Division facts (1-12)): surviving statement is box 12 → Engineer Ethan

16 ÷ 4 = 4 · 40 ÷ 8 = 5 · 24 ÷ 4 = 6 · 14 ÷ 2 = 7 · 72 ÷ 9 = 8 · 20 ÷ 2 = 10 · 1 ÷ 1 = 1 · 90 ÷ 10 = 9 · 2 ÷ 1 = 2 · 12 ÷ 4 = 3 · 121 ÷ 11 = 11