



The Golden Compass Caper

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

Detective: _____ Date: _____

Someone has snuck onto the flagship Windrunner and taken the Golden Compass! The Sky Dockmaster needs your help to track down the Rogue Captain 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 Captain is _____

Possible suspects

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

NAME	AIRSHIP TOOL	SKY CHARM	WRITING HAND	HAIR STREAK	SILLY WEAKNESS
Rex Rescue	Glider Wings	Glow Lantern	Left Handed	Red Streak	Squeaky Boots
Sailor Sam	Grapple Hook	Glow Lantern	Left Handed	Blue Streak	Shiny Badges
Gale Go	Steam Jetpack	Cloud Mist	Left Handed	Red Streak	Squeaky Boots
Bella Balloon	Bungee Rope	Wind Whistle	Right Handed	Red Streak	Tickly Feathers
Lulu Loop	Steam Jetpack	Glow Lantern	Right Handed	Gold Streak	Tickly Feathers
Penny Pilot	Grapple Hook	Spark Sparkler	Left Handed	Gold Streak	Shiny Badges
Max Altitude	Glider Wings	Cloud Mist	Right Handed	Blue Streak	Tickly Feathers
Gus Glider	Bungee Rope	Cloud Mist	Left Handed	Red Streak	Squeaky Boots
Navigator Nora	Bungee Rope	Spark Sparkler	Right Handed	Blue Streak	Tickly Feathers
Buster Bolt	Glider Wings	Glow Lantern	Left Handed	Gold Streak	Squeaky Boots
Wendy Wind	Climbing Boots	Wind Whistle	Left Handed	Red Streak	Shiny Badges
Piper Prop	Steam Jetpack	Glow Lantern	Right Handed	Gold Streak	Shiny Badges
Cleo Compass	Climbing Boots	Wind Whistle	Right Handed	Red Streak	Squeaky Boots
Cody Cloud	Bungee Rope	Wind Whistle	Left Handed	Red Streak	Squeaky Boots
First Mate Pip	Glider Wings	Shadow Cloak	Left Handed	Red Streak	Squeaky Boots
Skyler Swift	Steam Jetpack	Wind Whistle	Right Handed	Gold Streak	Squeaky Boots
Captain Barnaby	Glider Wings	Spark Sparkler	Left Handed	Gold Streak	Shiny Badges
Toby Turbo	Climbing Boots	Wind Whistle	Right Handed	Blue Streak	Squeaky Boots
Sally Star	Grapple Hook	Shadow Cloak	Left Handed	Blue Streak	Tickly Feathers
Artie Aero	Glider Wings	Wind Whistle	Left Handed	Blue Streak	Tickly Feathers
Dash Daring	Grapple Hook	Spark Sparkler	Right Handed	Gold Streak	Squeaky Boots

CLUE 1 Addition

To find the first clue, we need to count the total fuel tanks loaded onto the deck. Add up the barrels from the cargo hold.

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

T			T											T			
328	673	285	328	673	275	285	274	713	966	285	680	639	966	328	571	680	285

T													
328	673	285	680	673	524	713	966	313	766	840	966	524	507

$129 + 199 = \square \rightarrow$ T	$403 + 363 = \square \rightarrow$ C	$167 + 108 = \square \rightarrow$ I
$353 + 171 = \square \rightarrow$ A	$390 + 450 = \square \rightarrow$ L	$185 + 89 = \square \rightarrow$ F
$411 + 262 = \square \rightarrow$ H	$267 + 446 = \square \rightarrow$ D	$111 + 202 = \square \rightarrow$ W
$423 + 257 = \square \rightarrow$ S	$231 + 276 = \square \rightarrow$ K	$133 + 152 = \square \rightarrow$ E
$226 + 413 = \square \rightarrow$ N	$665 + 301 = \square \rightarrow$ O	$342 + 229 = \square \rightarrow$ U

Scratch space:

Rounding

The ship's radar screen is fuzzy. We can only read the distance if we round the miles to the nearest ten.

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

Round 42 to the nearest ten $\rightarrow$ **T**

Round 7,825 to the nearest thousand $\rightarrow$ **H**

Round 810 to the nearest hundred $\rightarrow$ **U**

Round 72 to the nearest ten $\rightarrow$ **W**

Round 4,230 to the nearest thousand $\rightarrow$ **D**

Round 852 to the nearest hundred $\rightarrow$ **E**

Round 8,505 to the nearest thousand $\rightarrow$

Round 399 to the nearest hundred → **A**

Round 4,539 to the nearest thousand $\rightarrow$ **L**

Round 29 to the nearest ten $\rightarrow$ **C**

Round 684 to the nearest hundred $\rightarrow$ **P**

Round 2,885 to the nearest thousand → **F**

Round 506 to the nearest hundred $\rightarrow$ **S**

Round 58 to the nearest ten $\rightarrow$ **N**

Round 20 to the nearest ten $\rightarrow$ **R**

Scratch space:

CLUE 3

Subtraction

Our ship is too heavy to chase the thief! We must subtract some weight by dropping extra sandbags over the side.

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

T																
735	756	176	749	484	419	419	654	484	267	839	756	328	484	267	283	839
565	654	214	283	603	328	557	738	839	299	512	176	654	283	364	565	557
															T	

$889 - 154 = \square \rightarrow \boxed{\text{T}}$

$818 - 399 = \square \rightarrow \boxed{\text{L}}$

$696 - 212 = \square \rightarrow \boxed{\text{I}}$

$493 - 194 = \square \rightarrow \boxed{\text{Q}}$

$766 - 17 = \square \rightarrow \boxed{\text{V}}$

$345 - 78 = \square \rightarrow \boxed{\text{N}}$

$775 - 172 = \square \rightarrow \boxed{\text{F}}$

$1219 - 380 = \square \rightarrow \boxed{\text{S}}$

$406 - 230 = \square \rightarrow \boxed{\text{E}}$

$797 - 232 = \square \rightarrow \boxed{\text{B}}$

$594 - 266 = \square \rightarrow \boxed{\text{R}}$

$453 - 239 = \square \rightarrow \boxed{\text{C}}$

$567 - 55 = \square \rightarrow \boxed{\text{U}}$

$663 - 380 = \square \rightarrow \boxed{\text{K}}$

$563 - 6 = \square \rightarrow \boxed{\text{O}}$

$1008 - 354 = \square \rightarrow \boxed{\text{A}}$

$846 - 108 = \square \rightarrow \boxed{\text{M}}$

$539 - 175 = \square \rightarrow \boxed{\text{Y}}$

$986 - 230 = \square \rightarrow \boxed{\text{H}}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

The gear room is organized in neat rows. Multiply the rows of supply crates to find how many we have left.

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

T					T													
110	56	99	3	54	110	15	6	11	99	15	56	55	11	55	15	99	11	
	T							T										
48	110	15	99	55	81	3	54	110	56	99	3	15	56	55	3	15		

$10 \times 11 = \square \rightarrow \text{T}$

$5 \times 3 = \square \rightarrow \text{R}$

$5 \times 11 = \square \rightarrow \text{A}$

$8 \times 7 = \square \rightarrow \text{H}$

$2 \times 3 = \square \rightarrow \text{U}$

$9 \times 11 = \square \rightarrow \text{E}$

$11 \times 1 = \square \rightarrow \text{D}$

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

$6 \times 8 = \square \rightarrow \text{S}$

$9 \times 9 = \square \rightarrow \text{K}$

$9 \times 6 = \square \rightarrow \text{N}$

Scratch space:

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

We need to share our map pieces equally among the search teams. Divide the total maps to get everyone started.

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:

$63 \div 9 = \boxed{}$

$96 \div 8 = \boxed{}$

$22 \div 11 = \boxed{}$

$100 \div 10 = \boxed{}$

$132 \div 12 = \boxed{}$

$36 \div 12 = \boxed{}$

$18 \div 2 = \boxed{}$

$44 \div 11 = \boxed{}$

$8 \div 8 = \boxed{}$

$12 \div 2 = \boxed{}$

$64 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain scaled the steep stone castle wall using climbing boots, then vanished from sight using a dark shadow cloak.
2. The villain soared silently through the clouds on glider wings, then lit up the hidden escape tunnel with a glow lantern.
3. The villain bounced safely over the spiked fence with a bungee rope, then vanished from sight using a dark shadow cloak.
4. The villain swung across the high wooden docks using a grapple hook, then vanished from sight using a dark shadow cloak.
5. The villain bounced safely over the spiked fence with a bungee rope, then escaped into the night inside a thick cloud mist.
6. The villain scaled the steep stone castle wall using climbing boots, then lit up the hidden escape tunnel with a glow lantern.
7. The villain bounced safely over the spiked fence with a bungee rope, then blew a loud wind whistle to scare away the guard birds.
8. The villain soared silently through the clouds on glider wings, then blinded the cameras with a bright spark sparkler.
9. The villain soared silently through the clouds on glider wings, then blew a loud wind whistle to scare away the guard birds.
10. The villain zoomed past the watchtower with a steam jetpack, then vanished from sight using a dark shadow cloak.
11. The villain scaled the steep stone castle wall using climbing boots, then blinded the cameras with a bright spark sparkler.
12. The villain zoomed past the watchtower with a steam jetpack, then escaped into the night inside a thick cloud mist.

Answer Key

The Golden Compass Caper

Culprit: Gus Glider

Bungee Rope · Cloud Mist · Left Handed · Red Streak · Squeaky Boots

Trail: Start 21 → Clue 1 19 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT USE THE SHADOW CLOAK"

$129 + 199 = 328$ (T) · $403 + 363 = 766$ (C) · $167 + 108 = 275$ (I) · $353 + 171 = 524$ (A) · $390 + 450 = 840$ (L) · $185 + 89 = 274$ (F) · $411 + 262 = 673$ (H) · $267 + 446 = 713$ (D) · $111 + 202 = 313$ (W) · $423 + 257 = 680$ (S) · $231 + 276 = 507$ (K) · $133 + 152 = 285$ (E) · $226 + 413 = 639$ (N) · $665 + 301 = 966$ (O) · $342 + 229 = 571$ (U)

Clue 2 (Rounding): "THE SUSPECT WRITES WITH THEIR LEFT HAND"

Round 42 to the nearest ten = 40 (T) · Round 7,825 to the nearest thousand = 8000 (H) · Round 810 to the nearest hundred = 800 (U) · Round 72 to the nearest ten = 70 (W) · Round 4,230 to the nearest thousand = 4000 (D) · Round 852 to the nearest hundred = 900 (E) · Round 8,505 to the nearest thousand = 9000 (I) · Round 399 to the nearest hundred = 400 (A) · Round 4,539 to the nearest thousand = 5000 (L) · Round 29 to the nearest ten = 30 (C) · Round 684 to the nearest hundred = 700 (P) · Round 2,885 to the nearest thousand = 3000 (F) · Round 506 to the nearest hundred = 500 (S) · Round 58 to the nearest ten = 60 (N) · Round 20 to the nearest ten = 20 (R)

Clue 3 (Subtraction): "THE VILLAIN SHRINKS BACK FROM SQUEAKY BOOTS"

$889 - 154 = 735$ (T) · $818 - 399 = 419$ (L) · $696 - 212 = 484$ (I) · $493 - 194 = 299$ (Q) · $766 - 17 = 749$ (V) · $345 - 78 = 267$ (N) · $775 - 172 = 603$ (F) · $1219 - 380 = 839$ (S) · $406 - 230 = 176$ (E) · $797 - 232 = 565$ (B) · $594 - 266 = 328$ (R) · $453 - 239 = 214$ (C) · $567 - 55 = 512$ (U) · $663 - 380 = 283$ (K) · $563 - 6 = 557$ (O) · $1008 - 354 = 654$ (A) · $846 - 108 = 738$ (M) · $539 - 175 = 364$ (Y) · $986 - 230 = 756$ (H)

Clue 4 (Multiplication facts (1-12)): "THE INTRUDER HAD A RED STREAK IN THEIR HAIR"

$10 \times 11 = 110$ (T) · $5 \times 3 = 15$ (R) · $5 \times 11 = 55$ (A) · $8 \times 7 = 56$ (H) · $2 \times 3 = 6$ (U) · $9 \times 11 = 99$ (E) · $11 \times 1 = 11$ (D) · $1 \times 3 = 3$ (I) · $6 \times 8 = 48$ (S) · $9 \times 9 = 81$ (K) · $9 \times 6 = 54$ (N)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Gus Glider

$63 \div 9 = 7$ · $96 \div 8 = 12$ · $22 \div 11 = 2$ · $100 \div 10 = 10$ · $132 \div 12 = 11$ · $36 \div 12 = 3$ · $18 \div 2 = 9$ · $44 \div 11 = 4$ · $8 \div 8 = 1$ · $12 \div 2 = 6$ · $64 \div 8 = 8$