



The Mystery of the Sabotaged Falcon

Grade 5 math · Subtraction, Addition, Multiplication, Fractions of a number · Reading level grades 5-6

Detective: _____ Date: _____

The legendary Silver Falcon prototype plane has been sabotaged right before the big race! The culprit snuck into the high-security hangar and left behind a series of puzzling aviation clues.

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 Bandit is _____

Possible suspects

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

NAME	SIGNATURE STUNT	WING GEAR	FLIGHT GRIP	HEADGEAR	FLIGHT LIMIT
Richard Byrd	Barrel Roll	Bio Fuel	Left Handed Grip	Flight Helmet	Motion Sickness
Antoine de Saint Exupery	Sonic Boom	Bio Fuel	Left Handed Grip	Silver Goggles	Fear of Heights
Baron Richthofen	Sonic Boom	Solar Panels	Right Handed Grip	Silver Goggles	Foggy Weather
Sally Ride	Sonic Boom	Solar Panels	Left Handed Grip	Flight Helmet	Motion Sickness
Alan Shepard	Tail Spin	Jet Engines	Left Handed Grip	Aviator Cap	Motion Sickness
Chuck Yeager	Cloud Dive	Solar Panels	Left Handed Grip	Flight Helmet	Fear of Heights
Wilbur Wright	Tail Spin	Glider Wings	Left Handed Grip	Silver Goggles	Foggy Weather
Jacqueline Cochran	Cloud Dive	Smoke Writers	Right Handed Grip	Silver Goggles	Fear of Heights
Clyde Cessna	Barrel Roll	Bio Fuel	Left Handed Grip	Silver Goggles	Fear of Heights
Billy Mitchell	Tail Spin	Bio Fuel	Right Handed Grip	Aviator Cap	Fear of Heights
Wiley Post	Tail Spin	Jet Engines	Right Handed Grip	Flight Helmet	Fear of Heights
William Boeing	Loop de Loop	Solar Panels	Right Handed Grip	Silver Goggles	Fear of Heights
James Doolittle	Sonic Boom	Smoke Writers	Left Handed Grip	Silver Goggles	Fear of Heights
Harriet Quimby	Barrel Roll	Smoke Writers	Left Handed Grip	Flight Helmet	Fear of Heights
Louis Bleriot	Barrel Roll	Glider Wings	Right Handed Grip	Flight Helmet	Motion Sickness
Amelia Earhart	Tail Spin	Jet Engines	Left Handed Grip	Silver Goggles	Motion Sickness
Valentina Tereshkova	Barrel Roll	Solar Panels	Right Handed Grip	Flight Helmet	Foggy Weather
Orville Wright	Tail Spin	Solar Panels	Left Handed Grip	Silver Goggles	Fear of Heights
Howard Hughes	Sonic Boom	Glider Wings	Right Handed Grip	Silver Goggles	Foggy Weather
Charles Lindbergh	Barrel Roll	Glider Wings	Left Handed Grip	Silver Goggles	Fear of Heights
Glenn Curtiss	Sonic Boom	Smoke Writers	Left Handed Grip	Silver Goggles	Foggy Weather

CLUE 1

The hangar log shows fuel was drained from the backup tank. Subtract the remaining gallons from the total starting fuel to unlock the next coordinates.

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

7438 5922 5305 4981 1594 4981 8292 5305 3344 7438 3440 3884 5305 4981 7251 3884 7438

1594 4981 5305 4981 3884 8725 2188 5748 8292 2188 7251 5305 8725 4981

$7718 - 280 = \square \rightarrow \boxed{\text{T}}$

10889 - 2597 = → **P**

$$9810 - 4505 = \boxed{} \rightarrow \boxed{\text{E}}$$

$2835 - 647 = \square \rightarrow \boxed{\mathbf{A}}$

$$5191 - 1751 = \boxed{} \rightarrow \boxed{\text{D}}$$

$9495 - 4514 = \boxed{} \rightarrow \boxed{\text{S}}$

$10263 - 3012 = \square \rightarrow \boxed{\text{N}}$

$$4802 - 1458 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$5135 - 3541 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$9505 - 3757 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$10366 - 1641 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$8072 - 4188 = \boxed{} \rightarrow \boxed{0}$$

$$6913 - 991 = \boxed{} \rightarrow \boxed{\text{H}}$$

Scratch space:

CLUE 2 Addition

A crate of spare propellers was left wide open on the runway. Add up all the propeller blades in each row to find the hangar number.

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

L																			
7799	3529	5748	4974	2043	6787	2086	8753	3529	8753	9616	3650	3343	5588	8998	6787	3650	6901	3923	
5748	3203	8037	2086	8753	3203	2086	4974	2043	3529	3923	4974	3343	5045	6901					

$2724 + 5075 = \square \rightarrow \text{L}$

$2200 + 1329 = \square \rightarrow \text{E}$

$5153 + 3845 = \square \rightarrow \text{M}$

$2058 + 1145 = \square \rightarrow \text{O}$

$759 + 1284 = \square \rightarrow \text{H}$

$1654 + 2269 = \square \rightarrow \text{S}$

$1041 + 2302 = \square \rightarrow \text{I}$

$3563 + 5190 = \square \rightarrow \text{D}$

$5038 + 4578 = \square \rightarrow \text{G}$

$1132 + 954 = \square \rightarrow \text{N}$

$3603 + 3184 = \square \rightarrow \text{A}$

$2308 + 2666 = \square \rightarrow \text{T}$

$2717 + 2871 = \square \rightarrow \text{P}$

$2552 + 1098 = \square \rightarrow \text{R}$

$3747 + 2001 = \square \rightarrow \text{F}$

$1541 + 3504 = \square \rightarrow \text{C}$

$3985 + 4052 = \square \rightarrow \text{U}$

$4181 + 2720 = \square \rightarrow \text{K}$

Scratch space:

CLUE 3
Multiplication facts (1-12)

We found stacks of flight maps organized in neat rows. Multiply the number of maps in each stack by the number of shelves to crack the locker code.

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

T																			
56	21	20	44	48	6	7	56	84	20	90	20	80	35	6	48	20	9		
12	42	7	90	20	60	6	7	11	45	6	20	90	20	6					

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

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

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

$7 \times 12 = \square \rightarrow \boxed{\text{N}}$

$12 \times 5 = \square \rightarrow \boxed{\text{C}}$

$7 \times 6 = \square \rightarrow \boxed{\text{B}}$

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

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

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

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

$10 \times 2 = \square \rightarrow \boxed{\text{E}}$

$7 \times 1 = \square \rightarrow \boxed{\text{O}}$

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

$10 \times 8 = \square \rightarrow \boxed{\text{R}}$

$6 \times 1 = \square \rightarrow \boxed{\text{L}}$

$4 \times 12 = \square \rightarrow \boxed{\text{I}}$

$9 \times 5 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 4

Fractions of a number

Only a fraction of the flight academy fleet was checked out yesterday. Calculate the exact number of active planes to reveal a hidden flight path.

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

S								S					S						
21	6	7	15	12	6	29	27	21	16	7	39	4	21	30	25	26	27	7	

						S													
22	39	22	22	25	27	21	24	27	7	27	25	27	16	12					

33	27	29	30	28	23														

$\frac{3}{4}$ of 28 = → S	$\frac{1}{2}$ of 32 = → F	$\frac{3}{6}$ of 14 = → R
$\frac{3}{6}$ of 46 = → D	$\frac{2}{8}$ of 108 = → E	$\frac{2}{8}$ of 60 = → A
$\frac{2}{3}$ of 33 = → G	$\frac{2}{10}$ of 195 = → O	$\frac{1}{4}$ of 96 = → W
$\frac{4}{8}$ of 66 = → B	$\frac{1}{6}$ of 168 = → N	$\frac{3}{6}$ of 50 = → L
$\frac{3}{8}$ of 32 = → T	$\frac{8}{10}$ of 5 = → M	$\frac{1}{6}$ of 36 = → C
$\frac{2}{8}$ of 104 = → V	$\frac{4}{8}$ of 60 = → I	$\frac{2}{4}$ of 58 = → H

Scratch space:

CLUE 5**Fractions of a number - the last clue**

The radar tower reports that the suspect spent a fraction of their journey flying through high winds. Figure out the total miles in the storm to locate the landing strip.

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:

$3/6 \text{ of } 16 = \boxed{}$

$3/6 \text{ of } 4 = \boxed{}$

$1/8 \text{ of } 40 = \boxed{}$

$1/4 \text{ of } 12 = \boxed{}$

$2/4 \text{ of } 24 = \boxed{}$

$4/10 \text{ of } 25 = \boxed{}$

$2/8 \text{ of } 44 = \boxed{}$

$2/4 \text{ of } 14 = \boxed{}$

$2/5 \text{ of } 10 = \boxed{}$

$1/5 \text{ of } 30 = \boxed{}$

$1/3 \text{ of } 27 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain performs a dizzying barrel roll, then pours in clean bio fuel.
2. The villain triggers a loud sonic boom, then pours in clean bio fuel.
3. The villain executes a steep cloud dive, then activates the colorful smoke writers.
4. The villain enters a risky tail spin, then charges the wide solar panels.
5. The villain triggers a loud sonic boom, then activates the colorful smoke writers.
6. The villain executes a steep cloud dive, then pours in clean bio fuel.
7. The villain enters a risky tail spin, then ignites the powerful jet engines.
8. The villain performs a dizzying barrel roll, then deploys silent glider wings.
9. The villain completes a perfect loop de loop, then ignites the powerful jet engines.
10. The villain executes a steep cloud dive, then deploys silent glider wings.
11. The villain enters a risky tail spin, then activates the colorful smoke writers.
12. The villain triggers a loud sonic boom, then ignites the powerful jet engines.

Answer Key

The Mystery of the Sabotaged Falcon

Culprit: Clyde Cessna

Barrel Roll · Bio Fuel · Left Handed Grip · Silver Goggles · Fear of Heights

Trail: Start 21 → Clue 1 15 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Subtraction): "THE SUSPECT DOES NOT USE SOLAR PANELS"

$7718 - 280 = 7438$ (T) · $10889 - 2597 = 8292$ (P) · $9810 - 4505 = 5305$ (E) · $2835 - 647 = 2188$ (A) · $5191 - 1751 = 3440$ (D) · $9495 - 4514 = 4981$ (S) · $10263 - 3012 = 7251$ (N) · $4802 - 1458 = 3344$ (C) · $5135 - 3541 = 1594$ (U) · $9505 - 3757 = 5748$ (R) · $10366 - 1641 = 8725$ (L) · $8072 - 4188 = 3884$ (O) · $6913 - 991 = 5922$ (H)

Clue 2 (Addition): "LEFT HANDED GRIP MARKS FOUND ON THE STICK"

$2724 + 5075 = 7799$ (L) · $2200 + 1329 = 3529$ (E) · $5153 + 3845 = 8998$ (M) · $2058 + 1145 = 3203$ (O) · $759 + 1284 = 2043$ (H) · $1654 + 2269 = 3923$ (S) · $1041 + 2302 = 3343$ (I) · $3563 + 5190 = 8753$ (D) · $5038 + 4578 = 9616$ (G) · $1132 + 954 = 2086$ (N) · $3603 + 3184 = 6787$ (A) · $2308 + 2666 = 4974$ (T) · $2717 + 2871 = 5588$ (P) · $2552 + 1098 = 3650$ (R) · $3747 + 2001 = 5748$ (F) · $1541 + 3504 = 5045$ (C) · $3985 + 4052 = 8037$ (U) · $4181 + 2720 = 6901$ (K)

Clue 3 (Multiplication facts (1-12)): "THE PILOT NEVER FLIES ABOVE CLOUD LEVEL"

$8 \times 7 = 56$ (T) · $3 \times 4 = 12$ (A) · $5 \times 7 = 35$ (F) · $7 \times 12 = 84$ (N) · $12 \times 5 = 60$ (C) · $7 \times 6 = 42$ (B) · $1 \times 9 = 9$ (S) · $11 \times 4 = 44$ (P) · $7 \times 3 = 21$ (H) · $1 \times 11 = 11$ (U) · $10 \times 2 = 20$ (E) · $7 \times 1 = 7$ (O) · $9 \times 10 = 90$ (V) · $10 \times 8 = 80$ (R) · $6 \times 1 = 6$ (L) · $4 \times 12 = 48$ (I) · $9 \times 5 = 45$ (D)

Clue 4 (Fractions of a number): "SCRATCHES FROM SILVER GOGGLES WERE LEFT BEHIND"

$\frac{3}{4}$ of 28 = 21 (S) · $\frac{1}{2}$ of 32 = 16 (F) · $\frac{3}{6}$ of 14 = 7 (R) · $\frac{3}{6}$ of 46 = 23 (D) · $\frac{2}{8}$ of 108 = 27 (E) · $\frac{2}{8}$ of 60 = 15 (A) · $\frac{2}{3}$ of 33 = 22 (G) · $\frac{2}{10}$ of 195 = 39 (O) · $\frac{1}{4}$ of 96 = 24 (W) · $\frac{4}{8}$ of 66 = 33 (B) · $\frac{1}{6}$ of 168 = 28 (N) · $\frac{3}{6}$ of 50 = 25 (L) · $\frac{3}{8}$ of 32 = 12 (T) · $\frac{8}{10}$ of 5 = 4 (M) · $\frac{1}{6}$ of 36 = 6 (C) · $\frac{2}{8}$ of 104 = 26 (V) · $\frac{4}{8}$ of 60 = 30 (I) · $\frac{2}{4}$ of 58 = 29 (H)

Clue 5 (Fractions of a number): surviving statement is box 1 → Clyde Cessna

$\frac{3}{6}$ of 16 = 8 · $\frac{3}{6}$ of 4 = 2 · $\frac{1}{8}$ of 40 = 5 · $\frac{1}{4}$ of 12 = 3 · $\frac{2}{4}$ of 24 = 12 · $\frac{4}{10}$ of 25 = 10 · $\frac{2}{8}$ of 44 = 11 · $\frac{2}{4}$ of 14 = 7 · $\frac{2}{5}$ of 10 = 4 · $\frac{1}{5}$ of 30 = 6 · $\frac{1}{3}$ of 27 = 9