



# The Case of the Missing Superfortress Blueprints

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

**Detective:** \_\_\_\_\_ **Date:** \_\_\_\_\_

A rare set of B-29 flight manuals has vanished from the restoration hangar! The Chief Aviation Historian needs your help to crack the case. A team of mechanics, pilots, and docents are under suspicion. Solve the math puzzles, gather the clues, and find out who took the manual before the Silver Queen takes off!

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 Gremlin Saboteur is** \_\_\_\_\_

# Possible suspects

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

| NAME               | FLIGHT DUTY     | SPECIALIZED TOOL | DOMINANT HAND | HAIR STYLE        | SENSES<br>DISTRACTION |
|--------------------|-----------------|------------------|---------------|-------------------|-----------------------|
| Howard Hughes      | Radio Operator  | Hex Wrench       | Left-Handed   | Sandy Blonde Crop | Aviation Grease       |
| Tex Henderson      | Flight Engineer | Flight Goggles   | Right-Handed  | Silver Buzzcut    | Bright Sunshine       |
| Mac McGinnis       | Navigator       | Hex Wrench       | Left-Handed   | Silver Buzzcut    | Loud Static           |
| Eddie Rickenbacker | Radio Operator  | Slide Rule       | Left-Handed   | Dark Brown Waves  | Loud Static           |
| Amelia Earhart     | Radio Operator  | Morse Key        | Right-Handed  | Dark Brown Waves  | Loud Static           |
| Ace Higgins        | Bombardier      | Flight Goggles   | Left-Handed   | Sandy Blonde Crop | Loud Static           |
| Peggy Carter       | Navigator       | Norden Bombsight | Right-Handed  | Silver Buzzcut    | Loud Static           |
| Jimmy Doolittle    | Pilot           | Slide Rule       | Right-Handed  | Dark Brown Waves  | Bright Sunshine       |
| Orville Wright     | Bombardier      | Morse Key        | Left-Handed   | Sandy Blonde Crop | Loud Static           |
| Betty Cooper       | Bombardier      | Hex Wrench       | Right-Handed  | Dark Brown Waves  | Aviation Grease       |
| Skip Jenkins       | Bombardier      | Slide Rule       | Right-Handed  | Silver Buzzcut    | Loud Static           |
| Charles Lindbergh  | Flight Engineer | Norden Bombsight | Right-Handed  | Silver Buzzcut    | Loud Static           |
| Snoop Jenkins      | Radio Operator  | Hex Wrench       | Left-Handed   | Sandy Blonde Crop | Loud Static           |
| Major Vance        | Navigator       | Flight Goggles   | Right-Handed  | Silver Buzzcut    | Aviation Grease       |
| Jacqueline Cochran | Navigator       | Flight Goggles   | Right-Handed  | Silver Buzzcut    | Loud Static           |
| Chuck Yeager       | Radio Operator  | Norden Bombsight | Left-Handed   | Dark Brown Waves  | Bright Sunshine       |
| Paul Tibbets       | Navigator       | Hex Wrench       | Right-Handed  | Silver Buzzcut    | Loud Static           |
| Captain Miller     | Pilot           | Flight Goggles   | Right-Handed  | Silver Buzzcut    | Loud Static           |
| Glenn Curtiss      | Bombardier      | Hex Wrench       | Right-Handed  | Dark Brown Waves  | Loud Static           |
| Billy Mitchell     | Radio Operator  | Morse Key        | Left-Handed   | Silver Buzzcut    | Aviation Grease       |
| Buzz Aldrin        | Navigator       | Slide Rule       | Left-Handed   | Silver Buzzcut    | Loud Static           |

## CLUE 1 Addition

Our mechanics are tallying up the spare rivets needed for the B-29's wing panels. Add the quantities together to find the total, and we will unlock the first clue left on the workbench!

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

|                                                                                                                                                                         |                                                                                        |                                                                                                                        |                                                                                        |                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <div><div>T</div><div></div><div></div></div> <div>8292 8790 8001</div>                                                                                                 | <div><div></div><div></div><div></div><div></div></div> <div>9470 5440 5411 5440</div> | <div><div>T</div><div></div><div></div></div> <div>8292 5637 8371</div>                                                | <div><div></div><div></div><div></div><div></div></div> <div>3854 5637 8001 5411</div> | <div><div></div><div></div><div>T</div></div> <div>7642 5637 8292</div> |
| <div><div></div><div></div><div></div></div> <div>8956 5411 8001</div>                                                                                                  | <div><div>T</div><div></div><div></div></div> <div>8292 8790 8001</div>                | <div><div></div><div></div><div></div><div></div><div></div><div></div></div> <div>7642 5637 8371 3854 8001 7642</div> |                                                                                        |                                                                         |
| <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div>T</div></div> <div>8497 5637 8079 8497 5411 5440 9175 8790 8292</div> |                                                                                        |                                                                                                                        |                                                                                        |                                                                         |

|                                               |                                               |                                               |
|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| $5500 + 2792 = \square \rightarrow \boxed{T}$ | $3675 + 5281 = \square \rightarrow \boxed{U}$ | $3215 + 4864 = \square \rightarrow \boxed{M}$ |
| $4004 + 5171 = \square \rightarrow \boxed{G}$ | $4742 + 3629 = \square \rightarrow \boxed{R}$ | $1336 + 2518 = \square \rightarrow \boxed{D}$ |
| $1823 + 3814 = \square \rightarrow \boxed{O}$ | $4569 + 3073 = \square \rightarrow \boxed{N}$ | $2010 + 3430 = \square \rightarrow \boxed{I}$ |
| $2864 + 5137 = \square \rightarrow \boxed{E}$ | $3510 + 5960 = \square \rightarrow \boxed{V}$ | $2931 + 5566 = \square \rightarrow \boxed{B}$ |
| $3746 + 1665 = \square \rightarrow \boxed{S}$ | $5762 + 3028 = \square \rightarrow \boxed{H}$ |                                               |

Scratch space:

## CLUE 2 Subtraction

The flight engineer is calculating how much fuel was drained from the fuel tanks during the night. Subtract the remaining fuel from the starting amount to reveal the second clue hidden in the logbook.

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

|          |      |      |      |      |      |      |          |      |          |          |      |      |      |      |      |          |      |          |      |  |
|----------|------|------|------|------|------|------|----------|------|----------|----------|------|------|------|------|------|----------|------|----------|------|--|
| <b>T</b> |      |      |      |      |      |      |          |      |          | <b>T</b> |      |      |      |      |      |          |      | <b>T</b> |      |  |
| 1407     | 5536 | 8370 | 8174 | 8804 | 8174 | 5271 | 8370     | 7610 | 1407     | 4921     | 1615 | 8270 | 1658 | 1658 | 8370 | 5961     | 1407 | 5536     | 8370 |  |
|          |      |      |      |      |      |      | <b>T</b> |      | <b>T</b> |          |      |      |      |      |      | <b>T</b> |      |          |      |  |
| 7448     | 8370 | 5653 | 8370 | 1615 | 7092 | 1995 | 1407     | 5536 | 1407     | 5536     | 8370 | 1615 | 1995 | 4921 | 5536 | 1407     |      |          |      |  |
|          |      |      |      |      |      |      |          |      |          |          |      |      |      |      |      |          |      |          |      |  |
| 5536     | 8270 | 4618 | 5961 |      |      |      |          |      |          |          |      |      |      |      |      |          |      |          |      |  |

$$2124 - 717 = \boxed{\phantom{000}} \rightarrow \boxed{\text{T}}$$

$$5845 - 192 = \boxed{\phantom{000}} \rightarrow \boxed{\text{V}}$$

$$6297 - 1376 = \boxed{\phantom{000}} \rightarrow \boxed{\text{G}}$$

$$12710 - 4340 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{E}}$$

$$10217 - 4256 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{D}}$$

$$8302 - 1210 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{W}}$$

$$4947 - 2952 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{I}}$$

$$9115 - 1505 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{C}}$$

$$2325 - 710 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{R}}$$

$$9612 - 4076 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{H}}$$

$$11229 - 2425 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{U}}$$

$$4149 - 2491 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{B}}$$

$$8712 - 1264 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{L}}$$

$$5531 - 913 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{N}}$$

$$12519 - 4249 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{A}}$$

$$6425 - 1154 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{P}}$$

$$10160 - 1986 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{S}}$$

Scratch space:

## Multiplication facts (1-12)

We have several crates of vintage spark plugs, arranged in even rows. Multiply the number of rows by the plugs in each row to help us locate the third clue taped to the hangar wall.

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

A 2x10 grid of boxes. The top row contains the following values from left to right: 'T' (orange), empty, empty, empty, empty, empty, empty, empty, 'T' (orange), empty, empty, empty, empty, empty, empty, empty, empty. The bottom row contains the following values from left to right: empty, empty, empty, empty, empty, empty, empty, empty, empty, empty, 'T' (orange), empty, 'T' (orange), empty, empty, empty, empty. Below each box is a number. The top row numbers are: 27, 35, 20, 18, 22, 70, 80, 20, 24, 20, 66, 27, 35, 20, 33, 24, 20, 44, 24, 108. The bottom row numbers are: 66, 45, 24, 33, 54, 60, 55, 70, 45, 66, 108, 27, 44, 27, 33, 22.

$3 \times 9 = \boxed{\phantom{00}} \rightarrow \boxed{\text{T}}$

$$11 \times 5 = \boxed{\phantom{00}} \rightarrow \boxed{\text{L}}$$

$$8 \times 10 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{v}}$$

$4 \times 5 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{E}}$

$$2 \times 11 = \boxed{\phantom{00}} \rightarrow \boxed{\text{C}}$$

$$7 \times 10 = \boxed{\phantom{00}} \rightarrow \boxed{0}$$

$6 \times 11 = \boxed{\phantom{00}} \rightarrow \mathbf{D}$

$$6 \times 4 = \boxed{\phantom{00}} \rightarrow \boxed{\text{R}}$$

$$9 \times 6 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{N}}$$

$$5 \times 9 = \boxed{\phantom{00}} \rightarrow \boxed{\text{U}}$$

$12 \times 9 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{S}}$

$11 \times 4 = \boxed{\phantom{00}} \rightarrow \boxed{\text{A}}$

$6 \times 3 = \boxed{\phantom{000}} \rightarrow \boxed{\text{Y}}$

$10 \times 6 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{G}}$

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

$11 \times 3 = \square \rightarrow \boxed{1}$

Scratch space:

**CLUE 4**
**Fractions of a number**

Only a fraction of the active runway lights are working tonight. Find this fraction of the total light count so we can follow the pathway to the fourth clue.

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

|          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|
| <b>W</b> |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |
| 28       | 30 | 10 | 15 | 23 | 19 | 8  | 20 | 12 | 14 | 10 | 10 | 20 | 12 | 3  | 16 | 19 | 8 | 20 |
|          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |
| 15       | 10 | 16 | 20 | 14 | 34 | 18 | 30 | 3  | 31 | 23 | 6  | 6  | 11 | 23 | 12 |    |   |    |

$4/6 \text{ of } 42 = \square \rightarrow \boxed{\text{W}}$

$5/10 \text{ of } 40 = \square \rightarrow \boxed{\text{S}}$

$2/4 \text{ of } 32 = \square \rightarrow \boxed{\text{A}}$

$1/10 \text{ of } 190 = \square \rightarrow \boxed{\text{N}}$

$2/6 \text{ of } 69 = \square \rightarrow \boxed{\text{U}}$

$1/2 \text{ of } 16 = \square \rightarrow \boxed{\text{D}}$

$5/6 \text{ of } 12 = \square \rightarrow \boxed{\text{F}}$

$8/10 \text{ of } 15 = \square \rightarrow \boxed{\text{T}}$

$1/6 \text{ of } 90 = \square \rightarrow \boxed{\text{O}}$

$1/2 \text{ of } 68 = \square \rightarrow \boxed{\text{L}}$

$3/4 \text{ of } 24 = \square \rightarrow \boxed{\text{V}}$

$5/10 \text{ of } 62 = \square \rightarrow \boxed{\text{B}}$

$6/8 \text{ of } 40 = \square \rightarrow \boxed{\text{E}}$

$7/10 \text{ of } 20 = \square \rightarrow \boxed{\text{I}}$

$1/6 \text{ of } 66 = \square \rightarrow \boxed{\text{C}}$

$2/10 \text{ of } 15 = \square \rightarrow \boxed{\text{R}}$

$2/10 \text{ of } 30 = \square \rightarrow \boxed{\text{Z}}$

Scratch space:

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

The flight crew needs to inspect a fraction of the propeller blades on the B-29 fleet. Solve this fraction to find which hangar bay holds the final clue!

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:**

$4/5 \text{ of } 5 = \boxed{\phantom{00}}$

$2/10 \text{ of } 25 = \boxed{\phantom{00}}$

$5/10 \text{ of } 4 = \boxed{\phantom{00}}$

$2/10 \text{ of } 15 = \boxed{\phantom{00}}$

$1/4 \text{ of } 4 = \boxed{\phantom{00}}$

$3/4 \text{ of } 8 = \boxed{\phantom{00}}$

$3/6 \text{ of } 24 = \boxed{\phantom{00}}$

$1/10 \text{ of } 90 = \boxed{\phantom{00}}$

$1/2 \text{ of } 20 = \boxed{\phantom{00}}$

$1/6 \text{ of } 66 = \boxed{\phantom{00}}$

$4/5 \text{ of } 10 = \boxed{\phantom{00}}$

**Step 2 - cross out the sentence with each answer:**

1. The villain loosened the landing gear bolts, then sneaked through the dark runway exit.
2. The villain loosened the landing gear bolts, then slipped into the tool locker.
3. The villain unlatched the cockpit escape hatch, then ran past the propeller displays.
4. The villain swiped the vintage flight manual, then ran past the propeller displays.
5. The villain swiped the vintage flight manual, then slipped into the tool locker.
6. The villain swiped the vintage flight manual, then sneaked through the dark runway exit.
7. The villain scrambled the radio frequencies, then escaped down the maintenance ladder.
8. The villain scrambled the radio frequencies, then ran past the propeller displays.
9. The villain unlatched the cockpit escape hatch, then slipped into the tool locker.
10. The villain unlatched the cockpit escape hatch, then sneaked through the dark runway exit.
11. The villain tinkered with the fuel manifold, then slipped into the tool locker.
12. The villain scrambled the radio frequencies, then slipped into the tool locker.

# Answer Key

## The Case of the Missing Superfortress Blueprints

### Culprit: Skip Jenkins

Bombardier · Slide Rule · Right-Handed · Silver Buzzcut · Loud Static

Trail: Start 21 → Clue 1 18 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

#### Clue 1 (Addition): "THE VISITOR DOES NOT USE THE NORDEN BOMBSIGHT"

$5500 + 2792 = 8292$  (T) ·  $3675 + 5281 = 8956$  (U) ·  $3215 + 4864 = 8079$  (M) ·  $4004 + 5171 = 9175$  (G) ·  $4742 + 3629 = 8371$  (R) ·  $1336 + 2518 = 3854$  (D) ·  $1823 + 3814 = 5637$  (O) ·  $4569 + 3073 = 7642$  (N) ·  $2010 + 3430 = 5440$  (I) ·  $2864 + 5137 = 8001$  (E) ·  $3510 + 5960 = 9470$  (V) ·  $2931 + 5566 = 8497$  (B) ·  $3746 + 1665 = 5411$  (S) ·  $5762 + 3028 = 8790$  (H)

#### Clue 2 (Subtraction): "THE SUSPECT GRABBED THE LEVER WITH THE RIGHT HAND"

$2124 - 717 = 1407$  (T) ·  $5845 - 192 = 5653$  (V) ·  $6297 - 1376 = 4921$  (G) ·  $12710 - 4340 = 8370$  (E) ·  $10217 - 4256 = 5961$  (D) ·  $8302 - 1210 = 7092$  (W) ·  $4947 - 2952 = 1995$  (I) ·  $9115 - 1505 = 7610$  (C) ·  $2325 - 710 = 1615$  (R) ·  $9612 - 4076 = 5536$  (H) ·  $11229 - 2425 = 8804$  (U) ·  $4149 - 2491 = 1658$  (B) ·  $8712 - 1264 = 7448$  (L) ·  $5531 - 913 = 4618$  (N) ·  $12519 - 4249 = 8270$  (A) ·  $6425 - 1154 = 5271$  (P) ·  $10160 - 1986 = 8174$  (S)

#### Clue 3 (Multiplication facts (1-12)): "THEY COVERED THEIR EARS DURING LOUD STATIC"

$3 \times 9 = 27$  (T) ·  $11 \times 5 = 55$  (L) ·  $8 \times 10 = 80$  (V) ·  $4 \times 5 = 20$  (E) ·  $2 \times 11 = 22$  (C) ·  $7 \times 10 = 70$  (O) ·  $6 \times 11 = 66$  (D) ·  $6 \times 4 = 24$  (R) ·  $9 \times 6 = 54$  (N) ·  $5 \times 9 = 45$  (U) ·  $12 \times 9 = 108$  (S) ·  $11 \times 4 = 44$  (A) ·  $6 \times 3 = 18$  (Y) ·  $10 \times 6 = 60$  (G) ·  $7 \times 5 = 35$  (H) ·  $11 \times 3 = 33$  (I)

#### Clue 4 (Fractions of a number): "WE FOUND STIFF STRANDS OF A SILVER BUZZCUT"

$\frac{4}{6}$  of 42 = 28 (W) ·  $\frac{5}{10}$  of 40 = 20 (S) ·  $\frac{2}{4}$  of 32 = 16 (A) ·  $\frac{1}{10}$  of 190 = 19 (N) ·  $\frac{2}{6}$  of 69 = 23 (U) ·  $\frac{1}{2}$  of 16 = 8 (D) ·  $\frac{5}{6}$  of 12 = 10 (F) ·  $\frac{8}{10}$  of 15 = 12 (T) ·  $\frac{1}{6}$  of 90 = 15 (O) ·  $\frac{1}{2}$  of 68 = 34 (L) ·  $\frac{3}{4}$  of 24 = 18 (V) ·  $\frac{5}{10}$  of 62 = 31 (B) ·  $\frac{6}{8}$  of 40 = 30 (E) ·  $\frac{7}{10}$  of 20 = 14 (I) ·  $\frac{1}{6}$  of 66 = 11 (C) ·  $\frac{2}{10}$  of 15 = 3 (R) ·  $\frac{2}{10}$  of 30 = 6 (Z)

#### Clue 5 (Fractions of a number): surviving statement is box 7 → Skip Jenkins

$\frac{4}{5}$  of 5 = 4 ·  $\frac{2}{10}$  of 25 = 5 ·  $\frac{5}{10}$  of 4 = 2 ·  $\frac{2}{10}$  of 15 = 3 ·  $\frac{1}{4}$  of 4 = 1 ·  $\frac{3}{4}$  of 8 = 6 ·  $\frac{3}{6}$  of 24 = 12 ·  $\frac{1}{10}$  of 90 = 9 ·  $\frac{1}{2}$  of 20 = 10 ·  $\frac{1}{6}$  of 66 = 11 ·  $\frac{4}{5}$  of 10 = 8