



The Spooky Endzone Mystery

Grade 3 math · Place value, Skip counting, Bar models, Fractions of a number, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

During the big Halloween night football game, someone stole the championship trophy right out of the stadium vault! Crack the math clues to find out who snuck into the locker room.

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 Endzone Phantom is _____

Possible suspects

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

NAME	COSTUME	SNACK	STANCE	HELMET	PENALTY
Davante Adams	Mummy Cleats	Spooky Soda	Right-Handed	Green Helmet	Loud Whistle
George Kittle	Mummy Cleats	Haunted Nachos	Left-Handed	Orange Helmet	Yellow Flag
DeAndre Hopkins	Skeleton Pads	Pumpkin Popcorn	Right-Handed	Black Helmet	Delay Flag
Myles Garrett	Mummy Cleats	Candy Corn Slime	Left-Handed	Orange Helmet	Yellow Flag
Christian McCaffrey	Mummy Cleats	Candy Corn Slime	Right-Handed	Orange Helmet	Yellow Flag
Maxx Crosby	Mummy Cleats	Spooky Soda	Right-Handed	Green Helmet	Yellow Flag
Nick Bosa	Vampire Cape	Haunted Nachos	Left-Handed	Green Helmet	Delay Flag
TJ Watt	Mummy Cleats	Spooky Soda	Right-Handed	Black Helmet	Yellow Flag
Travis Kelce	Mummy Cleats	Candy Corn Slime	Left-Handed	Green Helmet	Yellow Flag
Derrick Henry	Zombie Jersey	Pumpkin Popcorn	Right-Handed	Green Helmet	Delay Flag
Ceedee Lamb	Vampire Cape	Pumpkin Popcorn	Right-Handed	Orange Helmet	Yellow Flag
Josh Allen	Vampire Cape	Glow Hotdog	Left-Handed	Green Helmet	Delay Flag
Tyreek Hill	Vampire Cape	Haunted Nachos	Right-Handed	Orange Helmet	Yellow Flag
DK Metcalf	Skeleton Pads	Spooky Soda	Right-Handed	Black Helmet	Delay Flag
Jalen Hurts	Mummy Cleats	Haunted Nachos	Right-Handed	Orange Helmet	Yellow Flag
Micah Parsons	Vampire Cape	Glow Hotdog	Right-Handed	Orange Helmet	Yellow Flag
Patrick Mahomes	Skeleton Pads	Glow Hotdog	Left-Handed	Black Helmet	Yellow Flag
Stefon Diggs	Werewolf Mask	Spooky Soda	Right-Handed	Orange Helmet	Delay Flag
Aaron Rodgers	Werewolf Mask	Candy Corn Slime	Left-Handed	Orange Helmet	Yellow Flag
Lamar Jackson	Werewolf Mask	Haunted Nachos	Right-Handed	Green Helmet	Delay Flag
Justin Jefferson	Vampire Cape	Pumpkin Popcorn	Left-Handed	Orange Helmet	Delay Flag

CLUE 1

The scoreboard screen glitched and showed mystery digit places as the culprit darted past.

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

70 100 4000 50 7000 30 30 40 7000 800 500 7000 500 800 5000 70 4000 40 70

6000 30 5000 20 100 5000 70 500 5000 6000

What is the value of the 7 in 3,372?

A diagram showing a transformation. On the left is a simple rectangular box. An arrow points from this box to another rectangular box on the right. Inside the second box is the capital letter 'T'.

What is the value of the 4 in 4,369?

What is the value of the 5 in 6,458?

A diagram illustrating a transformation. On the left is a simple rectangular box. An arrow points from this box to a second box on the right. The second box is identical in shape but has a thick border and contains the letter 'V' in the center.

What is the value of the 2 in 925?

A diagram showing a transformation. On the left is a simple rectangular box. An arrow points from this box to another box on the right. The box on the right contains the letter 'W'.

What is the value of the 5 in 587?

→ **D**

What is the value of the 8 in 3,820?

A diagram showing a box with an arrow pointing to a box labeled 'N'.

What is the value of the 4 in 6,942?



What is the value of the 3 in 631?

A diagram illustrating a transformation. On the left is a simple rectangular box. An arrow points from this box to a second box on the right. The second box is identical in shape but contains the letter 'L' inside it.

What is the value of the 1 in 133?

A diagram showing a transformation. On the left is a rounded rectangular box. A right-pointing arrow is in the center. On the right is a square box containing the letter 'H'.

What is the value of the 5 in 85,414?

A diagram showing a transition from an empty box to a box containing the number 0. An arrow points from an empty box on the left to a box containing the number 0 on the right.

What is the value of the 6 in 46,811?

? → **G**

What is the value of the 7 in 17,232?

Scratch space:

CLUE 2

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

Diagram illustrating the sequence of boxes and their associated values for the two rows:

Row 1: [T, 80, 60, 25, 45, 130, 45, 9, 25, 27, T, 80, T, 80, 60, 35, 25, 40, 40, 28, T, 80, 60]

Row 2: [T, 80, 60, 25, 28, 35, 35, 28, 30, 60, T, 80, 60, 55, 90, 50]

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 → **T**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 → **U**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 → **A**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 → **N**

Skip-count by 10s. Fill the blank: 10, 20, 30, __, 50, 60 → **W**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **C**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 → **E**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 → **D**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 → **R**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 →

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, __, 65, 70 → **H**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, __, 33, 36 → **G**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **P**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 → **S**

Scratch space:

CLUE 3

Bar model word problems

Coach Frankie built a bar model on his clipboard to measure the mysterious footprints.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

Someone scared the villain off with Y G .

53 37 26 26 44 52 36 26 12

One group collected 7 haunted helmets and another group collected 46 haunted helmets. How many haunted helmets in all?

draw a bar model

Answer: → Y

There were 60 foam fingers in all. 34 foam fingers were used. How many foam fingers are left?

draw a bar model

Answer: → L

One group collected 8 glow whistles and another group collected 4 glow whistles. How many glow whistles in all?

draw a bar model

Answer: → A

The red team has 70 foam fingers and the blue team has 18 foam fingers. How many more foam fingers does the red team have?

draw a bar model

Answer: → W

Junior Detective shares 176 spooky tickets equally among 4 teams. How many spooky tickets does each team get?

draw a bar model

Answer: → O

The red team has 60 foam fingers and the blue team has 23 foam fingers. How many more foam fingers does the red team have?

draw a bar model

Answer: → E

Junior Detective has 6 times as many foam fingers as a teammate. The teammate has 6 foam fingers. How many foam fingers does Junior Detective have?

draw a bar model

Answer: → F

CLUE 4
Fractions of a number

The waterboy calculated a fraction of the ghost energy drinks remaining on the bench.

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

O 35	5	28	7	9	8	12	8	6	17	8	19	3	28	26	7	19	33	28	31
6	8	10	19	28	19	31	15	8	7	8									

$7/10 \text{ of } 50 = \square \rightarrow \text{O}$

$1/8 \text{ of } 40 = \square \rightarrow \text{R}$

$1/5 \text{ of } 75 = \square \rightarrow \text{C}$

$2/3 \text{ of } 15 = \square \rightarrow \text{F}$

$2/6 \text{ of } 9 = \square \rightarrow \text{P}$

$1/2 \text{ of } 14 = \square \rightarrow \text{N}$

$2/10 \text{ of } 60 = \square \rightarrow \text{H}$

$1/2 \text{ of } 66 = \square \rightarrow \text{W}$

$1/4 \text{ of } 104 = \square \rightarrow \text{I}$

$2/10 \text{ of } 85 = \square \rightarrow \text{M}$

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

$1/8 \text{ of } 72 = \square \rightarrow \text{G}$

$1/3 \text{ of } 93 = \square \rightarrow \text{S}$

$4/8 \text{ of } 56 = \square \rightarrow \text{A}$

$3/4 \text{ of } 8 = \square \rightarrow \text{L}$

$3/6 \text{ of } 38 = \square \rightarrow \text{T}$

Scratch space:

CLUE 5**Missing addends - the last clue**

The team mascot solved a missing number puzzle to open the stadium equipment shed.

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:

$6 + \underline{\quad} = 16$

$9 + \underline{\quad} = 17$

$9 + \underline{\quad} = 12$

$2 + \underline{\quad} = 4$

$4 + \underline{\quad} = 9$

$10 + \underline{\quad} = 16$

$6 + \underline{\quad} = 15$

$7 + \underline{\quad} = 19$

$7 + \underline{\quad} = 8$

$3 + \underline{\quad} = 7$

$3 + \underline{\quad} = 10$

Step 2 - cross out the sentence with each answer:

1. The villain put on a werewolf mask, then splashed candy corn slime.
2. The villain put on a werewolf mask, then tossed glow hotdog wrappers.
3. The villain wrapped up in a vampire cape, then munched haunted nachos.
4. The villain buckled on skeleton pads, then spilled pumpkin popcorn.
5. The villain put on a werewolf mask, then chugged spooky soda.
6. The villain pulled on a zombie jersey, then munched haunted nachos.
7. The villain wrapped up in a vampire cape, then splashed candy corn slime.
8. The villain wrapped up in a vampire cape, then spilled pumpkin popcorn.
9. The villain wrapped up in a vampire cape, then tossed glow hotdog wrappers.
10. The villain laced up mummy cleats, then splashed candy corn slime.
11. The villain laced up mummy cleats, then munched haunted nachos.
12. The villain wrapped up in a vampire cape, then chugged spooky soda.

Answer Key

The Spooky Endzone Mystery

Culprit: Jalen Hurts

Mummy Cleats · Haunted Nachos · Right-Handed · Orange Helmet · Yellow Flag

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DID NOT EAT GLOW HOTDOG"

What is the value of the 7 in 3,372? = 70 (T) · What is the value of the 4 in 4,369? = 4000 (E) · What is the value of the 5 in 6,458? = 50 (V) · What is the value of the 2 in 925? = 20 (W) · What is the value of the 5 in 587? = 500 (D) · What is the value of the 8 in 3,820? = 800 (N) · What is the value of the 4 in 6,942? = 40 (A) · What is the value of the 3 in 631? = 30 (L) · What is the value of the 1 in 133? = 100 (H) · What is the value of the 5 in 85,414? = 5000 (O) · What is the value of the 6 in 46,811? = 6000 (G) · What is the value of the 7 in 17,232? = 7000 (I)

Clue 2 (Skip counting): "THE SUSPECT THREW WITH THEIR RIGHT HAND"

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (T) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 = 130 (U) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (A) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (N) · Skip-count by 10s. Fill the blank: 10, 20, 30, __, 50, 60 = 40 (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (E) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 = 50 (D) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 = 35 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, __, 65, 70 = 60 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, __, 33, 36 = 30 (G) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (P) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (S)

Clue 3 (Bar model word problems): "YELLOW FLAG"

One group collected 7 haunted helmets and another group collected 46 haunted helmets. How many haunted helmets in all? = 53 (Y) · There were 60 foam fingers in all. 34 foam fingers were used. How many foam fingers are left? = 26 (L) · One group collected 8 glow whistles and another group collected 4 glow whistles. How many glow whistles in all? = 12 (A) · The red team has 70 foam fingers and the blue team has 18 foam fingers. How many more foam fingers does the red team have? = 52 (W) · Junior Detective shares 176 spooky tickets equally among 4 teams. How many spooky tickets does each team get? = 44 (O) · The red team has 60 foam fingers and the blue team has 23 foam fingers. How many more foam fingers does the red team have? = 37 (E) · Junior Detective has 6 times as many foam fingers as a teammate. The teammate has 6 foam fingers. How many foam fingers does Junior Detective have? = 36 (F)

Clue 4 (Fractions of a number): "ORANGE HELMET PAINT WAS LEFT AT SCENE"

$\frac{7}{10}$ of 50 = 35 (O) · $\frac{1}{8}$ of 40 = 5 (R) · $\frac{1}{5}$ of 75 = 15 (C) · $\frac{2}{3}$ of 15 = 10 (F) · $\frac{2}{6}$ of 9 = 3 (P) · $\frac{1}{2}$ of 14 = 7 (N) · $\frac{2}{10}$ of 60 = 12 (H) · $\frac{1}{2}$ of 66 = 33 (W) · $\frac{1}{4}$ of 104 = 26 (I) · $\frac{2}{10}$ of 85 = 17 (M) · $\frac{1}{2}$ of 16 = 8 (E) · $\frac{1}{8}$ of 72 = 9 (G) · $\frac{1}{3}$ of 93 = 31 (S) · $\frac{4}{8}$ of 56 = 28 (A) · $\frac{3}{4}$ of 8 = 6 (L) · $\frac{3}{6}$ of 38 = 19 (T)

Clue 5 (Missing addends): surviving statement is box 11 → Jalen Hurts

$6 + \underline{\quad} = 16 = 10$ · $9 + \underline{\quad} = 17 = 8$ · $9 + \underline{\quad} = 12 = 3$ · $2 + \underline{\quad} = 4 = 2$ · $4 + \underline{\quad} = 9 = 5$ · $10 + \underline{\quad} = 16 = 6$ · $6 + \underline{\quad} = 15 = 9$ · $7 + \underline{\quad} = 19 = 12$ · $7 + \underline{\quad} = 8 = 1$ · $3 + \underline{\quad} = 7 = 4$ · $3 + \underline{\quad} = 10 = 7$