



# The Case of the Penalty Phantom

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

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

Right before the big final at Sunfield Stadium, the team captain vanished from the locker room. All that was left behind were a muddy cleat print and a torn jersey. People say the Penalty Phantom grabbed her, and only careful detective work can track this sneaky player down.

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 Penalty Phantom is** \_\_\_\_\_

## Possible suspects

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

NAME	SIGNATURE MOVE	SNEAKY TRICK	PLAYER TYPE	SOCK COLOR	WEAK SPOT
Marco	long range blast	spin move	boy	blue	bright lights
Leo	long range blast	no look pass	boy	red	loud whistle
Zara	powerful header	fake slide tackle	girl	yellow	loud whistle
Felix	long range blast	spin move	girl	yellow	loud whistle
Mia	fancy footwork	spin move	boy	blue	bright lights
Lucia	long range blast	stepover fake	girl	yellow	bright lights
Hugo	fancy footwork	no look pass	girl	red	loud whistle
Sofia	bicycle kick	no look pass	boy	blue	loud whistle
Sammy	diving save	stepover fake	boy	blue	bright lights
Priya	diving save	fake slide tackle	boy	red	loud whistle
Ella	fancy footwork	fake slide tackle	boy	red	loud whistle
Oscar	powerful header	spin move	boy	red	loud whistle
Bruno	diving save	quick throw in	girl	red	loud whistle
Tariq	long range blast	stepover fake	boy	red	bright lights
Diego	diving save	no look pass	boy	red	muddy grass
Nina	powerful header	fake slide tackle	boy	blue	bright lights
Dani	fancy footwork	spin move	girl	yellow	loud whistle
Layla	diving save	no look pass	boy	red	loud whistle
Aisha	long range blast	no look pass	boy	yellow	loud whistle
Ruby	bicycle kick	fake slide tackle	girl	red	loud whistle
Maya	bicycle kick	stepover fake	girl	yellow	bright lights

**CLUE 1**

**Rounding**

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>T</b>														<b>T</b>				
7000	70	6000	200	4000	800	800	700	4000	40	3000	700	40	40	900	7000	600	900	700

  

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5000	300	4000	40	20	900	200	6000

- |                                     |                          |          |                                     |                          |          |                                  |                          |          |
|-------------------------------------|--------------------------|----------|-------------------------------------|--------------------------|----------|----------------------------------|--------------------------|----------|
| Round 7,390 to the nearest thousand | <input type="checkbox"/> | <b>T</b> | Round 288 to the nearest hundred    | <input type="checkbox"/> | <b>P</b> | Round 37 to the nearest ten      | <input type="checkbox"/> | <b>N</b> |
| Round 3,647 to the nearest thousand | <input type="checkbox"/> | <b>I</b> | Round 627 to the nearest hundred    | <input type="checkbox"/> | <b>D</b> | Round 759 to the nearest hundred | <input type="checkbox"/> | <b>L</b> |
| Round 205 to the nearest hundred    | <input type="checkbox"/> | <b>V</b> | Round 2,655 to the nearest thousand | <input type="checkbox"/> | <b>C</b> | Round 71 to the nearest ten      | <input type="checkbox"/> | <b>H</b> |
| Round 4,675 to the nearest thousand | <input type="checkbox"/> | <b>S</b> | Round 5,536 to the nearest thousand | <input type="checkbox"/> | <b>E</b> | Round 716 to the nearest hundred | <input type="checkbox"/> | <b>A</b> |
| Round 19 to the nearest ten         | <input type="checkbox"/> | <b>M</b> | Round 871 to the nearest hundred    | <input type="checkbox"/> | <b>O</b> |                                  |                          |          |

Scratch space:

**CLUE 2** Addition

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

<input type="text" value="A"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="A"/>	<input type="text"/>	<input type="text" value="A"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="A"/>	<input type="text"/>	<input type="text"/>
750	383	647	612	521	491	500	500	500	750	383	750	572	658	967	961	750	500	334

  

<input type="text" value="A"/>	<input type="text"/>	<input type="text" value="A"/>	<input type="text"/>
750	383	750	967

254 + 496 =	<input type="text"/>	<input type="text" value="A"/>	198 + 374 =	<input type="text"/>	<input type="text" value="B"/>	159 + 175 =	<input type="text"/>	<input type="text" value="H"/>
195 + 326 =	<input type="text"/>	<input type="text" value="N"/>	123 + 260 =	<input type="text"/>	<input type="text" value="W"/>	172 + 328 =	<input type="text"/>	<input type="text" value="S"/>
390 + 257 =	<input type="text"/>	<input type="text" value="I"/>	323 + 644 =	<input type="text"/>	<input type="text" value="Y"/>	424 + 234 =	<input type="text"/>	<input type="text" value="O"/>
511 + 450 =	<input type="text"/>	<input type="text" value="D"/>	209 + 403 =	<input type="text"/>	<input type="text" value="T"/>	281 + 210 =	<input type="text"/>	<input type="text" value="E"/>

Scratch space:

**CLUE 3**

**Subtraction**

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

<input type="text" value="A"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="A"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
337	344	270	487	332	569	257	573	679	643	344	386	554	337	332	386	643	257	386	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
643	257	573	386	186	186	316	386	386	105	386									

$736 - 399 =$	<input type="text"/>	<input type="text" value="A"/>	$528 - 184 =$	<input type="text"/>	<input type="text" value="L"/>	$437 - 251 =$	<input type="text"/>	<input type="text" value="F"/>
$821 - 252 =$	<input type="text"/>	<input type="text" value="W"/>	$601 - 47 =$	<input type="text"/>	<input type="text" value="M"/>	$567 - 297 =$	<input type="text"/>	<input type="text" value="O"/>
$561 - 304 =$	<input type="text"/>	<input type="text" value="H"/>	$633 - 146 =$	<input type="text"/>	<input type="text" value="U"/>	$642 - 69 =$	<input type="text"/>	<input type="text" value="I"/>
$1022 - 343 =$	<input type="text"/>	<input type="text" value="S"/>	$569 - 183 =$	<input type="text"/>	<input type="text" value="E"/>	$451 - 135 =$	<input type="text"/>	<input type="text" value="R"/>
$509 - 177 =$	<input type="text"/>	<input type="text" value="D"/>	$729 - 86 =$	<input type="text"/>	<input type="text" value="T"/>	$192 - 87 =$	<input type="text"/>	<input type="text" value="Z"/>

Scratch space:

**CLUE 4**

**Multiplication facts (1-12)**

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

<input type="text" value="A"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="A"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="A"/>	<input type="text"/>	
9	110	56	50	35	132	10	90	30	120	110	56	9	50	48	9	35
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
144	56	70	30	81	56	120	18	25	50							

$1 \times 9 =$	<input type="text"/>	<input type="text" value="A"/>	$10 \times 11 =$	<input type="text"/>	<input type="text" value="R"/>	$5 \times 2 =$	<input type="text"/>	<input type="text" value="C"/>
$12 \times 10 =$	<input type="text"/>	<input type="text" value="H"/>	$5 \times 6 =$	<input type="text"/>	<input type="text" value="T"/>	$6 \times 3 =$	<input type="text"/>	<input type="text" value="I"/>
$7 \times 5 =$	<input type="text"/>	<input type="text" value="S"/>	$7 \times 10 =$	<input type="text"/>	<input type="text" value="F"/>	$6 \times 8 =$	<input type="text"/>	<input type="text" value="W"/>
$9 \times 9 =$	<input type="text"/>	<input type="text" value="B"/>	$10 \times 9 =$	<input type="text"/>	<input type="text" value="K"/>	$12 \times 12 =$	<input type="text"/>	<input type="text" value="L"/>
$5 \times 5 =$	<input type="text"/>	<input type="text" value="N"/>	$11 \times 12 =$	<input type="text"/>	<input type="text" value="O"/>	$10 \times 5 =$	<input type="text"/>	<input type="text" value="D"/>
$7 \times 8 =$	<input type="text"/>	<input type="text" value="E"/>						

Scratch space:

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

$30 \div 5 = \square$

$77 \div 7 = \square$

$81 \div 9 = \square$

$33 \div 11 = \square$

$6 \div 6 = \square$

$10 \div 2 = \square$

$56 \div 8 = \square$

$18 \div 9 = \square$

$72 \div 6 = \square$

$24 \div 3 = \square$

$90 \div 9 = \square$

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

1. The villain blasts a long range shot, then sneaks a quick throw in.
2. The villain dribbles with fancy footwork, then twists into a spin move.
3. The villain blasts a long range shot, then twists into a spin move.
4. The villain dribbles with fancy footwork, then fakes a slide tackle.
5. The villain scores with a bicycle kick, then slips a no look pass.
6. The villain dives for a tricky save, then slips a no look pass.
7. The villain blasts a long range shot, then fakes a slide tackle.
8. The villain scores with a bicycle kick, then sneaks a quick throw in.
9. The villain blasts a long range shot, then slips a no look pass.
10. The villain dives for a tricky save, then twists into a spin move.
11. The villain dives for a tricky save, then fakes a slide tackle.
12. The villain dribbles with fancy footwork, then sneaks a quick throw in.

# Answer Key

## The Case of the Penalty Phantom

### Culprit: Ella

fancy footwork · fake slide tackle · boy · red · loud whistle

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

### Clue 1 (Rounding): "THE VILLAIN CANNOT DO A SPIN MOVE"

Round 7,390 to the nearest thousand = 7000 (T) · Round 288 to the nearest hundred = 300 (P) · Round 37 to the nearest ten = 40 (N) · Round 3,647 to the nearest thousand = 4000 (I) · Round 627 to the nearest hundred = 600 (D) · Round 759 to the nearest hundred = 800 (L) · Round 205 to the nearest hundred = 200 (V) · Round 2,655 to the nearest thousand = 3000 (C) · Round 71 to the nearest ten = 70 (H) · Round 4,675 to the nearest thousand = 5000 (S) · Round 5,536 to the nearest thousand = 6000 (E) · Round 716 to the nearest hundred = 700 (A) · Round 19 to the nearest ten = 20 (M) · Round 871 to the nearest hundred = 900 (O)

### Clue 2 (Addition): "A WITNESS SAW A BOY DASH AWAY"

$254 + 496 = 750$  (A) ·  $198 + 374 = 572$  (B) ·  $159 + 175 = 334$  (H) ·  $195 + 326 = 521$  (N) ·  $123 + 260 = 383$  (W) ·  $172 + 328 = 500$  (S) ·  $390 + 257 = 647$  (I) ·  $323 + 644 = 967$  (Y) ·  $424 + 234 = 658$  (O) ·  $511 + 450 = 961$  (D) ·  $209 + 403 = 612$  (T) ·  $281 + 210 = 491$  (E)

### Clue 3 (Subtraction): "A LOUD WHISTLE MADE THE THIEF FREEZE"

$736 - 399 = 337$  (A) ·  $528 - 184 = 344$  (L) ·  $437 - 251 = 186$  (F) ·  $821 - 252 = 569$  (W) ·  $601 - 47 = 554$  (M) ·  $567 - 297 = 270$  (O) ·  $561 - 304 = 257$  (H) ·  $633 - 146 = 487$  (U) ·  $642 - 69 = 573$  (I) ·  $1022 - 343 = 679$  (S) ·  $569 - 183 = 386$  (E) ·  $451 - 135 = 316$  (R) ·  $509 - 177 = 332$  (D) ·  $729 - 86 = 643$  (T) ·  $192 - 87 = 105$  (Z)

### Clue 4 (Multiplication facts (1-12)): "A RED SOCK THREAD WAS LEFT BEHIND"

$1 \times 9 = 9$  (A) ·  $10 \times 11 = 110$  (R) ·  $5 \times 2 = 10$  (C) ·  $12 \times 10 = 120$  (H) ·  $5 \times 6 = 30$  (T) ·  $6 \times 3 = 18$  (I) ·  $7 \times 5 = 35$  (S) ·  $7 \times 10 = 70$  (F) ·  $6 \times 8 = 48$  (W) ·  $9 \times 9 = 81$  (B) ·  $10 \times 9 = 90$  (K) ·  $12 \times 12 = 144$  (L) ·  $5 \times 5 = 25$  (N) ·  $11 \times 12 = 132$  (O) ·  $10 \times 5 = 50$  (D) ·  $7 \times 8 = 56$  (E)

### Clue 5 (Division facts (1-12)): surviving statement is box 4 → Ella

$30 \div 5 = 6$  ·  $77 \div 7 = 11$  ·  $81 \div 9 = 9$  ·  $33 \div 11 = 3$  ·  $6 \div 6 = 1$  ·  $10 \div 2 = 5$  ·  $56 \div 8 = 7$  ·  $18 \div 9 = 2$  ·  $72 \div 6 = 12$  ·  $24 \div 3 = 8$  ·  $90 \div 9 = 10$