## The Mystery of the Missing Umpire

## Wimbledon Maths Mystery Game

At this year's prestigious world tennis championships, the players are all prepared to challenge for the famous trophy. However, just as the last spectators are shown to their seats, disaster strikes. The umpire, who is needed to oversee the match, is missing! Immediately, all of the players spring into action and start looking for the missing umpire.

Can you solve the problems and reveal who discovers the whereabouts of the tennis umpire?


The Mystery of the Missing Umpire

| Player | Gender | Continent | Age | Kit Colour | Tennis Skill |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Anna Avraham | Female | Asia | 24 | Red | Serve |
| Bailey Brown | Male | Europe | 22 | Green | Volley |
| Chow Chu | Female | Asia | 20 | White | Slice |
| Daniel Diaz | Male | South America | 21 | Blue | Speed |
| Elif Earl | Female | Australasia | 27 | Purple | Backhand |
| Felix Falade | Male | Africa | 31 | Black | Slice |
| George Gonzales | Male | North America | 35 | White | Serve |
| Harnam Hafeez | Female | Australasia | 25 | Green | Volley |
| India Ings | Female | Europe | 30 | Purple | Serve |
| Joshua Jelani | Male | Africa | 21 | White | Slice |
| Kuljeet Kimura | Female | Asia | 23 | Green | Volley |
| Li Lopez | Male | South America | 24 | Black | Speed |
| Matt Martin | Male | Australasia | 34 | Blue | Backhand |
| Nikita Naylor | Female | North America | 31 | Black | Slice |
| Odetta Otto | Female | Europe | 30 | Green | Serve |
| Preet Patel | Male | Asia | 20 | Purple | Volley |
| Queenie Quarrie | Female | Australasia | 19 | Blue | Backhand |
| Rehan Romero | Male | South America | 23 | White | Serve |
| Sophie Selassie | Female | Africa | 22 | Black | Speed |
| Thierry Toussaint | Male | Europe | 32 | Purple | Volley |
| Violet Vera | Female | North America | 27 | Blue | Speed |
| Wen Wu | Female | Asia | 24 | Black | Slice |



## Clue 1: Calculating Angles

Calculate the value of the angles marked $A$ to $I$.


The solution that occurs the most will reveal a clue about who finds the umpire.

| $A=$ | $B=$ | $C=$ |
| :---: | :---: | :---: |
| $D=$ | $E=$ | $F=$ |
| $G=$ | $H=$ | $I=$ |


| $65^{\circ}$ | $20^{\circ}$ | $115^{\circ}$ |
| :---: | :---: | :---: |
| The player does not come <br> from North America. | The player does not come <br> from Europe. | The player does not come <br> from Africa. |

Clue: The player who finds the umpire doesn't come from $\qquad$ .


## Clue 2: Arithmetic

Find a path through the maze by following the correct arithmetic calculations. You can only move horizontally or vertically.

The path will reveal a clue about the player who finds the umpire.

| Stumb | 406-9 = 397 | $36 \times 4=144$ | $\frac{3}{9}+\frac{4}{9}=\frac{7}{9}$ | $\frac{9}{10}-\frac{3}{10}=\frac{5}{10}$ |
| :---: | :---: | :---: | :---: | :---: |
| $928-100=828$ | $\begin{gathered} 1019+ \\ 392=1511 \end{gathered}$ | $11-6.05=5.5$ | $91 \div 7=13$ | $6 \times 4 \times 3=75$ |
| $178 \times 2=356$ | $8.4+1.9=10.3$ | $9.7-0.05=9.65$ | $\begin{gathered} 2508+ \\ 3865=6374 \end{gathered}$ | $\begin{gathered} 90000- \\ 900=89100 \end{gathered}$ |
| $\begin{gathered} 307376- \\ 7298=135178 \end{gathered}$ | $630 \div 9=7$ | $7^{2}=49$ | $1210 \div 11=12$ | $\begin{aligned} & 1001 \times 1000 \\ & =1001000 \end{aligned}$ |
| $5150 \div 5=1030$ | $\begin{gathered} 13.7- \\ 3.84=9.86 \end{gathered}$ | $7 \times 1 \frac{1}{2}=10 \frac{1}{2}$ | $57 \times 17=1069$ | $\frac{1}{3}+\frac{1}{6}=\frac{1}{2}$ |
| $(37-9) \div 4=7$ | $\frac{1}{4} \times \frac{1}{3}=\frac{1}{7}$ | $1.23 \times 8=8.84$ | $\frac{3}{5} \div 3=\frac{1}{5}$ | $20 \%$ of $140=28$ |
| The player's special skill is not speed or a backhand. | The player's special skill is not a backhand or slice. | The player's special skill is not speed or a slice. | The player's special skill is not a volley or backhand. | The player's special skill is not speed or a serve. |

Clue: The skill of the player who finds the umpire isn't $\qquad$ .


## Clue 3: Mean

Find the mean of each set of numbers in the left-hand column and match them with the answers on the right.

The remaining answer box will give you a clue about the player who finds the umpire.

| $5,6,8,3,4$ |
| :---: |
| $1,7,1,7,9$ |
| $3,3,6,3,3$ |
| $9,7,6,8,7$ |
| $7,4,2,2,5$ |
| $1,6,3,7,2$ |
| $1,10,4,3,4$ |
| $3,6,8,1,9$ |


| 4.4 | purple or white |
| :---: | :---: |
| 5 | black or blue |
| 5.4 | green or black |
| 4 | blue or purple |
| 7.4 | white or black |
| 5.2 | green or blue |
| 4.2 | green or white |
| 3.8 | black or purple |
| 3.6 | purple or green |

Clue: The player who finds the umpire has a $\qquad$ or $\qquad$ kit.


## Clue 4: Symmetry

Look at each reflection. If the shape has been reflected correctly, put a tick. If it has been reflected incorrectly, put a cross. Count the number of ticks and crosses.

If there are more ticks than crosses, the player who finds the umpire is female.
If there are more crosses than ticks, the player who finds the umpire is male.





(Circle the correct answer.)
Clue: The player who finds the umpire is female/male.

## Clue 5: Coordinates

On this coordinates grid, there are five quadrilaterals. The coordinates of each vertices have been written below but one of the written coordinates is incorrect.


Circle the incorrect coordinates. The column with the most incorrect answers will tell you the age of the player who finds the umpire.

| A | $(3,6)$ | $(9,6)$ | $(9,8)$ | $(3,9)$ |
| :---: | :---: | :---: | :---: | :---: |
| B | $(-9,3)$ | $(1,2)$ | $(1,5)$ | $(-9,5)$ |
| C | $(3,-9)$ | $(3,-3)$ | $(-2,-3)$ | $(-9,-2)$ |
| D | $(7,0)$ | $(2,10)$ | $(-4,10)$ | $(-6,7)$ |
| E | $(0,-2)$ | $(6,-2)$ | $(8,0)$ | $(3,0)$ |
|  | $\mathbf{1 9 - 2 2}$ | $\mathbf{2 3 - 2 6}$ | $\mathbf{2 7 - 3 0}$ | $\mathbf{3 1 - 3 5}$ |

Clue: The player who finds the umpire is aged $\qquad$

The player who was responsible for finding the umpire is $\qquad$

