Pythagoras Final

Name: Click or tap here to enter text.

Introduction

Three of your friends have been lucky enough to get tickets to the AFL Grand Final. They are all sitting in different positions and each of them is boasting on an online group chat that they have the best viewing position. You decide to settle the argument by asking each of them to message their seating position and then draw the diagram below in order to work out who is seated closest to the action.

Seating position diagram



*Table One: Key*

|  |  |
| --- | --- |
| **Structure** | **Diagram** |
| **Playing field** |  |
| **Stand** |  |
| **Friends** | **Billy Blue**  **Penny Purple Red**  **Rodney Red** |
| **Measurements** |  |

*Table Two: Measurements*

|  |  |
| --- | --- |
| **Coloured arrow** | **Distance in metres** |
| **Black** | **111 m** |
| **Grey** | **82 m** |
| **Red** | **41 m** |
| **Blue** | **13 m** |
| **Purple** | **26 m** |

Aim

Use Pythagoras Theorem to work out which of your friends is sitting closest to the middle of the MCG and tell your friends who actually has the best seat.

**If you need help with Pythagoras Theorem, try this online resource:** <https://www.khanacademy.org/math/basic-geo/basic-geometry-pythagorean-theorem/geo-pythagorean-theorem/v/the-pythagorean-theorem>

Tasks

1. On a separate piece of paper draw out three right angle triangles with your friend as one point, the centre of the MCG as the other point and the point directly below your friend as the third point (see example below)

**Rodney Red**

**Centre of MCG**



1. Use the measurements in the table above to mark in the known measurements on each of the triangles you have created.
2. Use Pythagoras Theorem to solve the unknown length of the triangle to work out who is sitting closest to the action (show working out).
3. Complete the table below:

|  |  |
| --- | --- |
| **Friend** | **Distance to middle of MCG (metres)** |
| **Rodney Red** | Click or tap here to enter text. |
| **Penny Purple** | Click or tap here to enter text. |
| **Billy Blue** | Click or tap here to enter text. |

1. Complete the sentence below:

Based on the distance to the centre of the MCG, Choose an item. has the best seat at the AFL Grand Final.

1. Submit this worksheet along with a photo of your working out to your teacher for feedback.