

Epicentre and Magnitude (Teacher)

Discussion Questions Answers

- a) **What assumptions are being made about the P and S wave velocity in the region?**

We assume that both types of wave move at a constant velocity.

- b) **What factor(s) would contribute to your circles not intersecting at one point?**

All circles would not intersect if your measurements are not precise or if the hypocenter of the earthquake were deep underground so that there is no defined epicentre.

- c) **What are the limitations of this way of determining earthquake magnitude?**

The velocity profile of the surrounding ground needs to be accurately known in order to determine the earthquake's magnitude in this way.