

Underneath the arches

Teacher notes

Why use this resource?

Students are asked to decide whether using the trapezium rule would give an under or over estimate of the area between the curve and the x -axis for the sketch graphs from [Gradient match](#). Rather than focusing on the numerical aspect of using the trapezium rule, in this resource students are only given sketch graphs and are prompted to think about geometric features of the curves.

Preparation

If cards have not previously been printed for Gradient match then these will need to be prepared.

Possible approach

This open-ended investigation can be used flexibly and over more than one lesson: you could choose to look at a selection of the cards to compare and contrast features of the graphs, or as an opportunity for reflection after doing some more formal work on the trapezium rule.

Possible extension

Students could read [Why are gradients important in the real world?](#) to find out about the significance of these topics in “the real world.”