

# Sizes and shapes on the railway Page 1

As part of the railway a viaduct had to be built to enable it to cross over the River Maun. It was made of stone and had many different shapes. Now we are going to look at those shapes and sizes.

A. Looking at the plan view of the viaduct, work out the following in **square metres**:

1. The perimeter around the outside of the viaduct:  $50 + 50 + 10 + 10 =$

2. The total area covered by the viaduct:  $50 \times 10 =$

B. Looking at both views of the viaduct can you find:

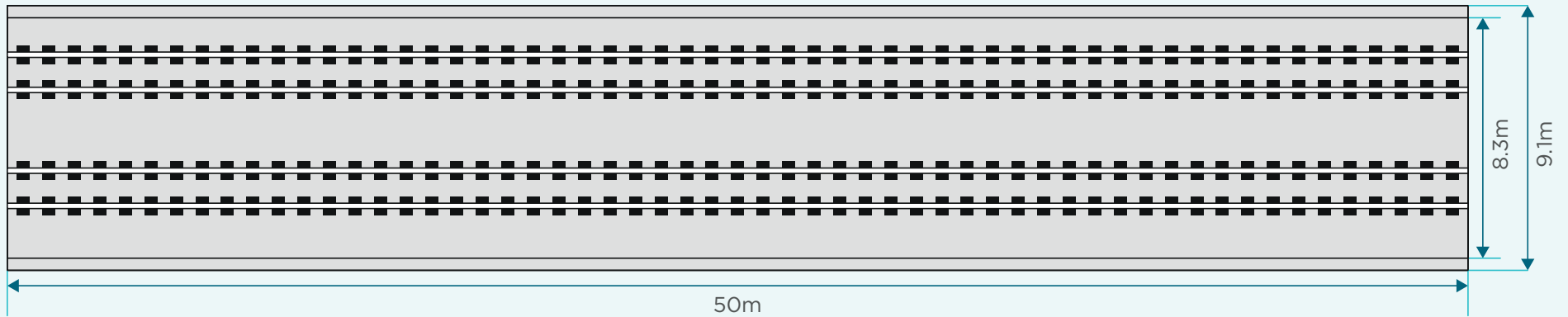
1. A rectangle?

2. An arch?

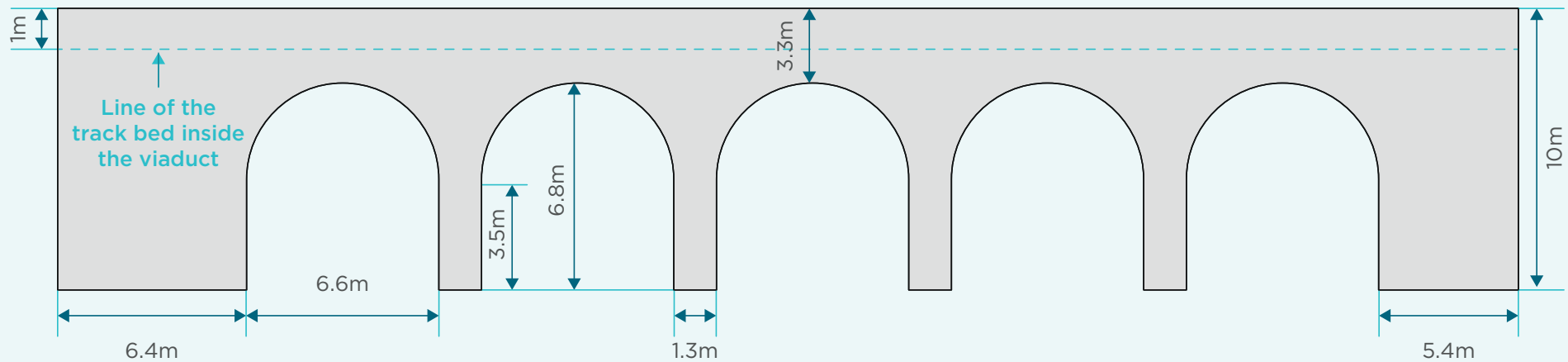
3. How many arches can you see?

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Plan view of the viaduct



Side view of the viaduct



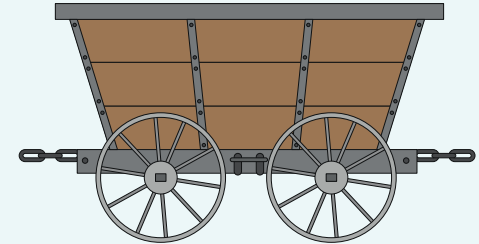
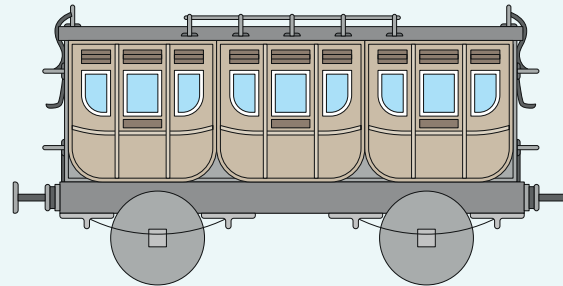
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C. Looking at the bottom view of the viaduct, how many right-angles can you find?

D. Looking at both views of the viaduct which shapes are symmetrical?

E. Looking at both drawings of the viaduct what parts are parallel?

F. The below is a drawing of an individual rail from 1819. Is it symmetrical?



G. The following is a sketch of a rail coach from 1848 and a wagon from 1826. The coaches are symmetrical. Can you draw a line through the centre of symmetry?

H. Looking at the coach:

1. How many squares can you see?

2. How many circles can you see?

I. Looking at the coach:

1. How many circles can you see?

2. What parallel parts can you see?