MATHEMATICS ACTIVITY 5
What was important in the design of a building?
Looking for symmetry, number patterns, and proportion.

The activity involves looking for clues about what the architect thought he had to do to please the owner and build an up to date structure.

i) First identify examples of symmetry and decide whether they have line symmetry or rotational symmetry. Then draw the axis of symmetry in as many examples as you can find. You will need a ruler and can use two different colours of pen to indicate the two sorts of symmetry you find (e.g. red for line; blue for rotational.)

ii) Now look for proportions in the building.

a) Start by measuring the distance between the doors. Then measure the distance between the doors and the end corner. Is there any relationship between these measurements? Estimate the height of each part of the building. Is the facade divided equally by bands of decoration? Record your findings.

b) Find a way of working out how many of the first floor heights go into the length of the building. Using a pencil and thumb while standing at a distance might be a possible method. Try it.

c) See if you can find other relationships: using door heights or window heights as a unit, how many make up the height of the building? You could use your thumb and a pencil from a distance to do this roughly. Do the same thing with the length of the building. Record your findings.

iii) Explore the number aspects of the building. How many panes of glass make up a window? How many windows are there in the front of the building? How many panes of glass in the front? Is this the same on the back? Do these numbers make a pattern?

iv) Can you find use the same methods on the sides and back of the building? Are there any number relationships between each of these sides?