Mini Project – 'Architecture'

When it comes to construction, the honeybee seems to be a much more natural engineer than any human architect or builder. The honeycomb follows a repeating hexagonal pattern which uses the least amount of wax to store a given volume of honey. It has been proved by mathematicians that this structure is the most efficient one and honeybees instinctively build such shapes in a very precise way. We, as humans are able to achieve such tasks. Indeed, we can perform them with even greater precision. But not instinctively, only by using mathematics…

The module consists of two parts.

Every member should share his/her research ideas in detail with the group members (2 in a group) and plan on a presentation to the rest of the class.

Part 1: Building the house (Measurements of lengths and angles)

Draw a layout to build a house with rooms is squared, rectangular, circular, etc…

A wall should have two windows equally spaced horizontally; the door should be centered, etc…

Part 2: Decorating the house (Measurements of areas)

Measurement of the space floor to know how much carpet is needed; measurement of the wall space to know how much paint/wallpaper is needed, etc…

After working out all those areas, you should be given a budget limit in order to decide whether putting carpet everywhere is affordable for example (depending on the price of the carpet per meter squared), and if not, how many rooms will have carpet (as it is useless to buy carpet for half a room).

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