**Task 13 — Three Dimensional Shapes**

**Student Worksheet**

Here you have pictures of several 3-dimensional objects:

![Images of 3D shapes](image)

For each of the following objects, write down the number of faces, edges and vertices.

<table>
<thead>
<tr>
<th>Object</th>
<th>Faces</th>
<th>Edges</th>
<th>Vertices</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>6</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>G</td>
<td>6</td>
<td>8</td>
<td>6</td>
</tr>
</tbody>
</table>

For each of the following objects, are all the faces rectangles? (Tick Yes or No)

<table>
<thead>
<tr>
<th>Object</th>
<th>Yes/No</th>
<th>Explain your answer</th>
</tr>
</thead>
</table>
| C      | No     | *X 2 sides are squares*  
Explain your answer: *You can tell because when you look at the shape, the first thing you see.* |
| E      | Yes   | *Because if you look more closely at it, you can see different shapes.*  
Explain your answer: *Because the first thing you see is not a square.* |
| G      | Yes   |                     |
This is a list of properties of a particular 3-dimensional object:
- A cross-section of the object is an equilateral triangle
- One of the faces of the object is a square.
- All the faces of the object are regular polygons.

In the diagram above, which is the letter of the only object which could have all these properties?
Write down the name of the object. Give an explanation or proof for your answer.

1. Because there is a square at the bottom of the shape!
2. Because all of the lines are angled.

More detailed explanation needed.