1. **The vampires are taking part in the funeral of Ivan the Terrible. They are standing around the coffin in a perfect circle, where each participant has the same distances from their neighbours. All positions are numbered. While Dracula - the vampire king – is telling his speech about the dead man, he is standing in the sixth position. Opposite to Dracula, Vlad – another vampire – is standing in the sixteenth position.
How many vampires are participating in the funeral? Show your calculations or logic in written form.**
2. **This script was made by an earlier participant of the Horror Labyrinth program. Maybe you can meet him along your way. So the script is the following equation but the mathematical operations are missing:**

**( 6 \_2) \_ 8 \_ 9 \_1 = 13**

**Your Task is to fill the empty places with mathematical operators so that the equation could be correct.**

1. **Little Van Helsing created a function defined in Notepad ++ as homework for a part of a Vampire Eliminating Algorithm but when he arrived at school he realised that he had not saved it onto his pendrive. He took a big breath and started to remember how the function worked.
He could find out the following values when f is applied for the given two numbers:**

**f(3,2)=7**

**f(4,3)=14**

**f(5,4)=23**

**f(6,5)=34**

**Give the value of f(7,6). Show your logic or calculations, too.**

1. **The Mummy is designing a torture-chamber inside his pyramid for the graverobbers. This chamber has the shape of a triangle that is cut out by one of the diagonals from a rectangular room. The rectangular room has the following parameters: its width is 11.7 metres and the depth is 7.8 m.**

**Draw the figure of the torture-chamber.
Give the length of the third wall of the torture-chamber.**

1. **The ghosts of the labyrinth were playing with the calculator and had a competition for writing existing words on the screen of it. The winner was Casper who managed to write the word hello.
Write down the steps – which buttons can be pushed in which order – that you manage to have the word hello on the calculator’s screen.**
2. **Dracula and his family had their dinner together at Halloween. His wife is called Agnes, and the daughters Betty and Cybilla. The waiter wrote the first letters of the participants’ names to their blood glasses but mixed them up when was distributing among them.**

**Who had whose glass in the hand after the mistake of the waiter, if the following statements are known:**

* **No one got his own blood glass.**
* **Betty had letter A on her glass.**
* **There was not D on the glass in Cybilla’s hand.**
* **On Dracula’s glass there wasn’t the letter B.**
1. **In the following chart you can read out a word in many different ways when starting in the top left corner and ending in the bottom right one.**

|  |  |  |  |
| --- | --- | --- | --- |
| **S** | **P** | **I** | **D** |
| **P** | **I** | **D** | **E** |
| **I** | **D** | **E** | **R** |

**Give the exact number of how many different routs exist from the top left to the bottom right corner during while we are reading the word spider.**