

ESCAPE FROM THE CASTLE!

The answers to each room can be found on separate pages so that if you get stuck at any point, you can find the answer to just that room and then carry on with the challenge!

ROOM ONE

On a dice, opposite faces add up to 7.

Pick three numbers that add to 8 e.g.

2 4 2 - the faces hidden on the bottom will be 5 3 5.

These add to 13.

No matter which three numbers you pick that add to 8, the hidden numbers on the bottom will add to 13. This is the first key!

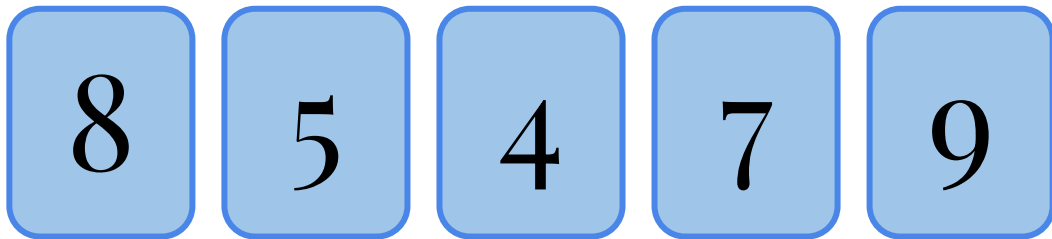


ROOM TWO

We know the first key number is thirteen, so the first two cards add to 13. You can start by trying two numbers that add to 13. However, you must remember that you can only use the digits 0-9 once each!

The fourth card has to be 7, 8 or 9 because the last card can be 9 at the most.

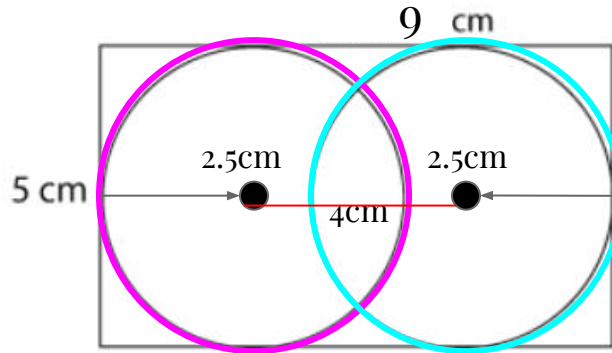
The only combination of numbers that work with the clues are:



Therefore the second key (the last card) is nine!

Room Three

The second key was nine therefore this is the length of the rectangle below:



Because the height of the rectangle is 5cm, so is the width. This means the middle of the pink circle is 2.5cm in from the left side of the rectangle. The middle of the other circle is 2.5cm in from the right. Add them together = 5cm and subtract that from the length of the rectangle (9cm) = 4cm apart!

You then need to square 4 and subtract one to get the key number...

$4 \times 4 = 16 - 1 = 15$ which is the THIRD key number!

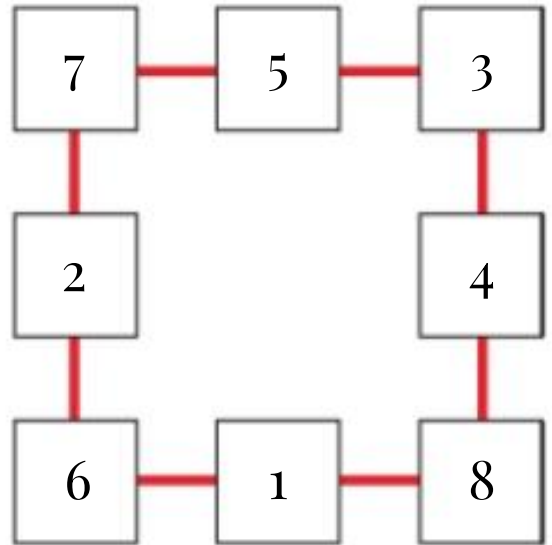
ROOM FOUR

The third key number is fifteen, so the sides of the diagram to the right all add to 15.

The digits 1-8 have to be arranged to make this happen.

The corner numbers will always be the same even if your answer does not look identical to ours!

To find the fourth key, you add together the corners (which equal 24) and subtract 10. Therefore the fourth key is fourteen!



ROOM FIVE

If the tarts are counted in fours there are three left over.

If they are counted in threes there is one left over.

This is the key information to help us find out how many jam tarts there are. It tells us that the number of tarts is both:

- a multiple of 4 plus 3
- a multiple of 3 plus 1

So you could use your times tables knowledge to find a number that fits both these facts:

4x table	+ 3	3x table	+ 1
4	7	3	4
8	11	6	7
12	15	9	10
16	19	12	13
20	23	15	16
24	27	18	19

Therefore the fifth and last key is nineteen!

THE FINAL QUESTION!

Now we know all the key numbers!

Key 1 - thirteen

Key 2 - nine

Key 3 - fifteen

Key 4 - fourteen

Key 5 - nineteen

We use the following code:

A = 1, B = 2, etc. until y = 25 and z = 26

Key 1 - thirteen = M

Key 2 - nine = I

Key 3 - fifteen = O

Key 4 - fourteen = N

Key 5 - nineteen = S

If you rearrange this, you know that Skippy's real name is Simon!

Hurray! You have escaped the castle - well done! Let us know how you got on.