

## Dice in a corner

28/3/13



### What Was The Puzzle?

This puzzle was called 'Dice in a Corner.' You had to try to add up three die to make exactly eighteen. There are some catches. When you place the three dice down the numbers on the top of the bottom die had to be the same number as the one on the bottom of the middle. It's the same with the middle and the top. Also the die have to be arranged so they were theoretically in a corner meaning there are a total of only seven faces showing. Another limitation was that the dice had to face straight out from the corner and not in an L shape.

### What Did We Do?

Jack and I used lots of strategies. Here they are:

#### We:

- Guessed and Checked
- Drew a Picture or Graph
- Made a List or Table
- Looked for a Pattern
- Made a Model
- Tried all possibilities



### Our Thinking:

To begin with we used guess and check to make a model. We continued this for two answers until we began to look for a pattern. Unfortunately we did not find one. As we found more answers we drew 3D models of the stacks of dice to record them. To make sure we had not missed any answers we stacked the die in all the legal ways and rotated them horizontally one at a time. Once we were confident that we had found all the answers as we had tried all possibilities we made a list to store them neatly.

### What Did We Find Out?

We found four answers. The first answer took a while as we were getting to understand the puzzle. But eventually I cracked it.

### Answer 1:

This answer was the tricky but we found out by a trial and error. This answer took us around a lot of twists and turns and it eventually led us to the following answer. The answer was: on the bottom dice the 3 and 1. On the middle dice the 1 and 3. On the top dice the numbers were 1 and 4. On the top of all the dice the number was 5.

### Answer 2:

This answer was the easier as we knew what we were doing. This answer came naturally. From the second that we placed the dice the rest of the answer just flowed. The answer is as follows, bottom dice, 2 and 6, middle dice, 2 and 1, top dice, 1 and 2. On the top of all the dice was the number 4.

### Answer 3:

This answer took us two days after the first two answers. This answer was by far the trickiest. It was so tricky it took us three whole days to get it. The answer was the bumpiest and the one that had the most turns. It ended out to be:



Answer One



Answer Two



Answer Three

bottom dice the digits were 2 and 1. The middle dice a digits were 5 and 1. On the top dice the digits were 5 and 1. On the top of all the dice was the number 3.

#### Answer 4:

This answer was the easiest and last answer Jack and I discovered. It came straight after the answer 3. The answer is as follows. On the bottom dice the digits were 2 and 4. On the middle dice the digits were 4 and 2. On the top dice the digits were 3 and 2. On top of all of those was 1.



Answer Four

#### Were There Any New Puzzles or Questions

The only question or new puzzle I thought of was " what would happen if you could place the dice in an L shape"?

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