Dice in a corner, by Jack Carey. 14/03/2013

What Was The Puzzle?

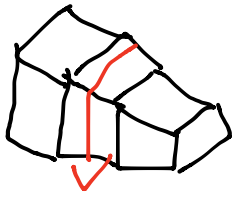
This puzzle involves 3 dice in a corner:

We had to arrange the dice in a corner in a way, as such in the picture, so that all the visible numbers, in this case, 2, 4, 2, 4, 2, 3, and 1, added up to 18, but all the numbers that are touching other dice must be the same. For example the first two dice that are touching each other, the numbers on that side must both be one.

What Did We Do?

This puzzle is mostly trial and error, guess and check, and try to find as many possibilities as possible. I started by joining the numbers that must match on each dice together and turning the dice one at a time so different numbers showed up. I counted how much more or less we needed to get eighteen, and turned one die so the amount would increase or decrease slightly. This method was simple, and I found quite a few answers. I also tried it with one, two, four, and five dice.

My Strategy: turn One die at a time.



What Did We Find?

Some of the answers I found were:

Two dice

Three Dice

Cannot show all pictures because the file size is to big!!

Four Dice

Five Dice

It is impossible to make 18 with only 1 die. I also found that when you have three dice, the first two dies cannot have six touching each other, because the result is too high no matter what you do. I found lots of other patterns like this throughout my working, but to many to be listed. I think there are many more solutions that are possible to be made, by turning one die instead of the other.

Were There Any New Puzzles Or Questions?

I wondered if you could reach a different target, with many dies! Such as, 10 dice, and the target being 67! Changing the target wouldn't change the strategy, but would take more time!