

Sealed Solution

Age 7 to 11 ★★

A set of ten cards, each showing one of the digits from 0 to 9, is divided up between five envelopes so that there are two cards in each envelope. The sum of the two numbers inside it is written on each envelope:

7	8	13	14	3
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What numbers could be inside the "8" envelope?

Feeling Stuck – Here is a clue

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What are the possible ways of making the numbers on the envelopes? Which number has the fewest possible combinations? It might be worth starting from this envelope and looking at what could be in the others.

Answer

How I solved *Sealed Solution*

24-1-13

Firstly, we got some 0-9 digit cards (0-9) and found the different totals which added up to 7, 8, 13, 14 and 3.

<u>7</u>	<u>8</u>	<u>13</u>	<u>14</u>	<u>3</u>
7 + 0	0 + 8	9 + 4	8 + 6	2 + 1
4 + 3	6 + 2	7 + 6	9 + 5	3 + 0
5 + 2	7 + 1	5 + 8		
6 + 1	5 + 3			

I started with 3 because it only has two possibilities and went up to the 7 and 8 because they had more possibilities.

After that we tried to see what totalled them again and I knew we couldn't use the same number twice. The first time I tried I got it wrong but the second time I realised I had got it right because I hadn't used a number twice.