1 Introduction

2 Warm-Up

The sum is 2.

-1	4	-7	6
-6	5	0	3
8	-5	2	-3
1	-2	7	-4

3 Think Oustide the Box

1. 888 + 88 + 8 + 8 + 8 = 1,000
2. One of the 'fathers' is also a grandfather. Therefore the other father is both a son and a father to the grandson. In other words, the one father is both a son and a father.

4 The River

1. bring over the rabbit, leave it, and go back
2. bring over the fox
3. go back with the rabbit
4. leave the rabbit at the beginning and bring over the carrots
5. bring over the rabbit

5 3 Musketeers

There are many ways of explaining/thinking about this truly brain bending riddle! It all boils down to the fact that the lawyers' math is incorrect. They did NOT spend \$9 • 3 + \$2.They spent exactly \$27 dollars. \$25 for the room and \$2 for the tip. Remember they got exactly \$3, in total back. Another way to think about the answer to this riddle is to just pretend that the bellhop refunded \$3 to the lawyers (rather than giving them \$5 and receiving \$2 back). If the lawyers get \$3 back and each takes \$1. They they spent exactly \$27 dollars.

6 Knight, Knave, Spy

Alex is a Knight, Brook is a Spy, Cody is a Knave. Brook is not the knight, since if he is, then Alex would also be the knight. Cody is not the knight, since his statement would then be a lie. So Alex is the knight. And Cody is the knave, and Brook is the spy.

7 Dark Coins

Pick any 20 coins then flip them over and your done! This works because of something called complements. Say you pick n amount of silver coins in that pile of twenty. That means the other pile should have 20-n coins. So in order to get the number of silver coins equal to each other in both piles, you need to get 20-n coins in the pile you picked. Therefore, just flip all the coins in your pile and you done.

8 Autobiographical Numbers

1. 1+2+1+0 = 4 and 3+2+1+1+0+0+0 = 7. the sum is equal to the number of digits in the number.

6210001000. All digits must add to 10. Because of this there must be only one non-zero value in the 5th, 6th, 7th, 8th, or 9th position. There must also be 0's in the 3 and 4's position in order to match the sum of ten. Therefore the digit in the 0's position must be a digit from 5 to 9. After trial and error we can conclude our number is 6210001000.