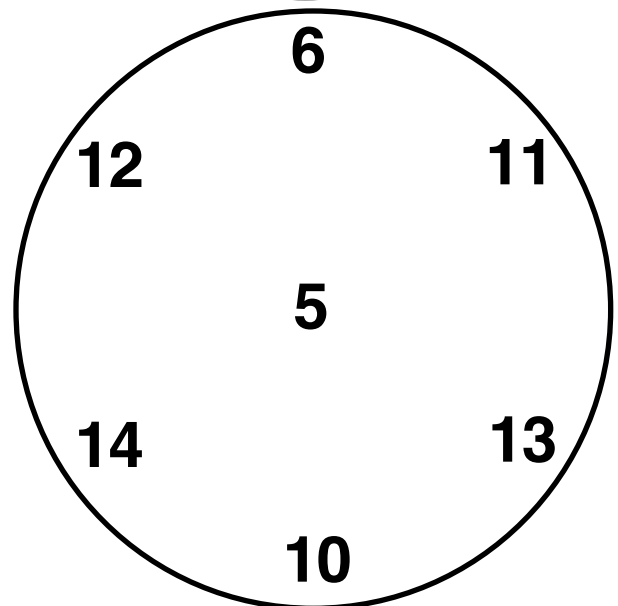
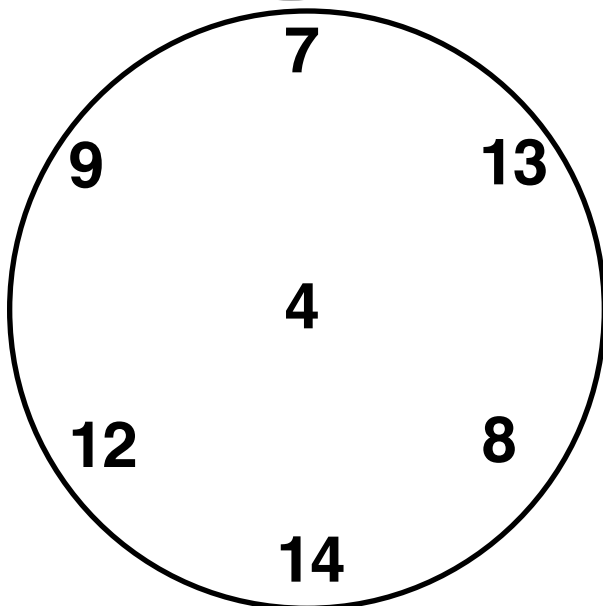
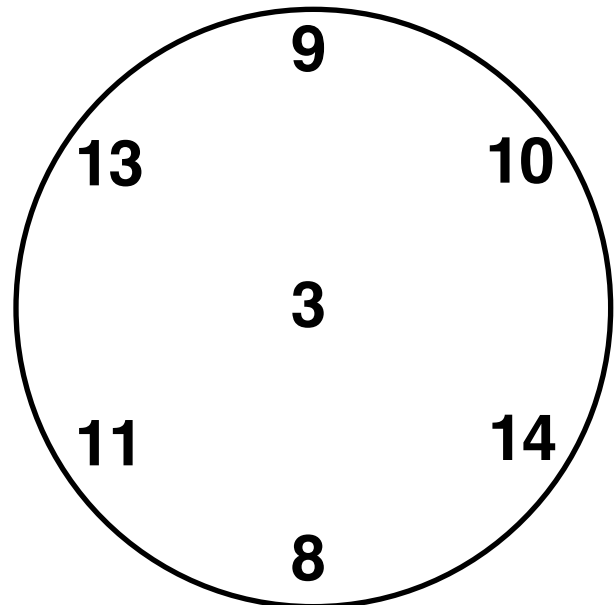
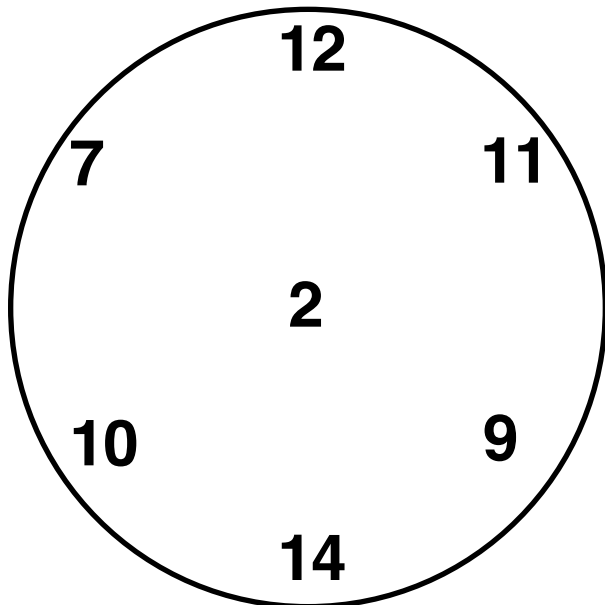
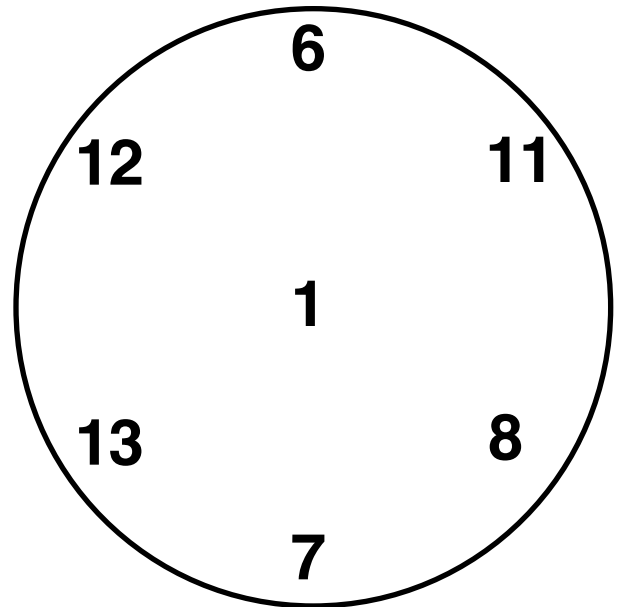


Telling Time

Cut out the five cards. Place the 5 cards on the desk. Ask a student to think of a number between 1 and 14 inclusive. Turn your back to the desk so you cannot see the cards. Tell the student to pick up every card that has their number on it. You look at the remaining cards and you can immediately announce their number.



Telling Time

Procedure:

Cut out the five cards. Place the 5 cards on the desk. Ask a student to think of a number between 1 and 14 inclusive. Have them tell a friend. Turn your back so you cannot see which cards they pick up. Tell the student to pick up every card that has their number on it. Emphise that you did not see them take the cards. Turn around and look at the remaining cards and immediately announce their number. If they say that is not their number have the friend verify you are correct.

How Its done

Add the numbers in middle of every card left over on desk and subtract the sum from 15 to get the number they thought of.

The total of the middle numbers on the cards they selected will total their number. That does not help find their number because you did not see the cards they took.

Notes on making your own cards:

1. The order of the numbers on the outside of the circle does not matter.
2. The shape of the object does not matter. A hexagon would have been neat as there are 6 numbers on the outside. I chose a circle because I thought a clock theme worked well and gave me a good title. The instructions in the first clock also seemed like a nice touch.

How the trick works

The 5 numbers in the center of the circles are 1 , 2 , 3 , 4 and 5. The total of these numbers is 15.

Take some the numbers in the set 1 , 2 , 3 , 4 and 5. and find their total. Find the total of the numbers you did not take. **The two totals will have a sum of 15.**

You take 1 and 5. **They total 6.** The remaining numbers are 2 , 3 , 4 **They total 9.**

You take 3 , 4 , 5. **They total 12.** The remaining numbers are 1 , 2 **They total 3.**

You take 1 , 2 , 3 , 4. **They total 10.** The remaining number is 5 **It totals 5.**

You take 3 . **It totals 3.** The remaining numbers are 1 , 2 , 4 , 5 **It totals 12.**

In every case the 2 totals must sum to 15.

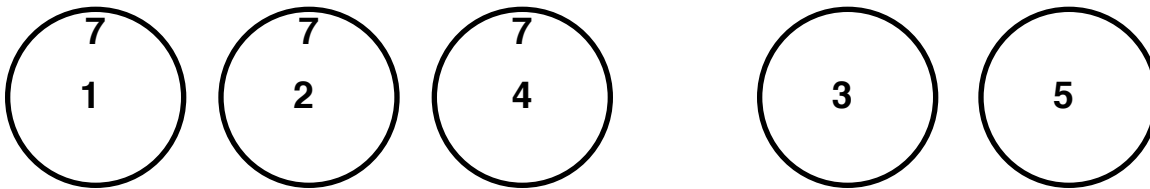
The basis for the trick

The numbers 1 , 2 , 3 , 4 , 5 are written on separate papers and put on a desk. You take any part of the 5 numbers without me looking. When I turn around I add the numbers remaining and get a total. I subtract my total from 15 to get your total. That is the entire basis of the trick. It is all about the 5 center number and the fact that they total 15.

All I have left to explain is what the numbers around the circle have to do with the center numbers and how the number from 1 to 14 is involved. That is is the real beauty of this trick.

Lets say you chose the number 7

$7 = 1 + 2 + 4$ Put 7 on the cards with a 1 , 2 and 4 in the center and **NOT** on the cards with 3 and 5 in the center.

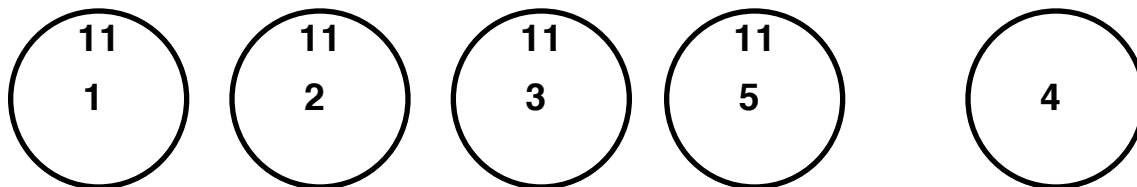


When you take the cards with a 7 on them you must take the cards with a 1 , 2, and 4 in the center and leave the cards with a 3 and 5 in the center remaining on the desk.

I turn around and see the cards with 3 and 5 in the center remaining. The center numbers for these cards total 8. If the total of all 5 centers is 15 and the ones I see total 8 the total of the ones you have must total 7. You chose the number 7

Lets say you chose the number 11

$11 = 1 + 2 + 3 + 5$ Put 11 on the cards with a 1, 2, 3 and 5 in the center and **NOT** on the card with a 4 in the center



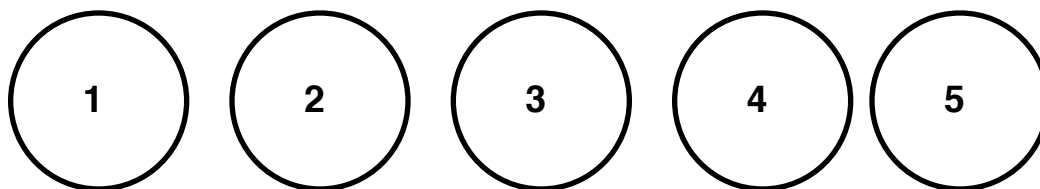
When you take the cards with an 11 on them you must take the cards with a 1, 2, 3 and 5 in the center and leave the card with a 4 in the center.

I turn around and see the card with a 4 in the center remaining. The center number for this cards totals 4. If the total of all 5 centers is 15 and the one I see totals 4 the total of the ones you have must total 11.

You chose the number 11

Lets say you chose the number 3

The numbers 1, 2, 3, 4 and 5 are used only in the centers. They are not listed on the outside



Only one card has a 5 on it so you must take the cards with a 5 in the center and leave the cards with a 1, 2, 4, and 5 in the center remaining

I turn around and see the cards with a 1, 2, 4, and 5 in the center remaining. The center number for these cards totals 12. If the total of all 5 centers is 15 and the one I see total 12 the total of the ones you have must total 3. You chose the number 3.

How to make the Cards

Draw 5 cards in the shape of a circle. Put a 1 in the center of the first card, a 2 in the center of the second card, a 3 in the center of the third card, a 4 in the center of the fourth card and a 5 in the center of the fifth card

Express a number from 6 to 14 as the sum of any combination of the numbers 1, 2, 3, 4, 5 without using 1, 2, 3, 4 or 5 more than once in the sum. Put that number on the outside of the cards with the centers whose numbers made up the sum. Do this for all the numbers 6 to 14 one number at a time. There may be more then one way to express this sum but the use of as many numbers as possible allows the cards to have more numbers on the outside. This makes it harder to see how the trick works.

A detailed step by step set of instructions are on the next page

Making the 5 Cards

Step 1: Put a 1 in the center of the first card, a 2 in the center of the second card, a 3 in the center of the third card, a 4 in the center of the fourth card and a 5 in the center of the fifth card

Step 2: Express the numbers 6 to 14 as the sum of any combination of the numbers 1, 2, 3, 4, 5 without using 1, 2, 3, 4, 5 more than once in the sum. There may be more than one way to express this sum but the use of as many numbers as possible allows the cards to have more numbers on the outside. This makes it harder to see how the trick works.

Step 3A: Start with the number 7. Express 7 as the sum of any combination of the numbers 1, 2, 3, 4 and 5 without using them more than once in the sum. Put 7 on the outside of each of the cards that you used to create the sum for 7.

Example. $7 = 1 + 2 + 4$. Put the number 7 on the outside of each of the cards with a 1, 2 and 4 in the center of a card

Step 3B: Next use the number 8. Express 8 as the sum of any combination of the numbers 1, 2, 3, 4 and 5 without using them more than once in the sum. Put 8 on the outside of each of the cards that you used to create the sum for 7.

Example. $8 = 1 + 3 + 4$. Put the number 8 on the outside of each of the cards with a 1, 3 and 4 in the center of a card.

Continue this process with the remaining numbers. The table below shows the sums used for my cards. You could have chosen different sums. Your cards would look different but still work.

The number 7 to 14 expressed as the sum of any combination of the numbers 1, 2, 3, 4 and 5 without using 1, 2, 3, 4 or 5 more than once in the sum.

Number selected	How it will be expressed	the number is placed on the following cards in the locations shown
1	1 in center	1 in the center of Card 1
2	2 in center	2 in the center of Card 2
3	3 in center	3 in the center of Card 3
4	4 in center	4 in the center of Card 4
5	5 in center	5 in the center of Card 5
6	$1 + 5$	6 on the outside of Cards 1 and 5
7	$1 + 2 + 4$	7 on the outside of Cards 1, 2 and 4
8	$1 + 3 + 4$	8 on the outside of Cards 1, 3, and 4
9	$2 + 3 + 4$	9 on the outside of Cards 2, 3 and 4
10	$2 + 3 + 5$	10 on the outside of Cards 2, 3 and 5
11	$1 + 2 + 3 + 5$	11 on the outside of Cards 1, 2, 3 and 5
12	$1 + 2 + 4 + 5$	12 on the outside of Cards 1, 2, 4 and 5
13	$1 + 3 + 4 + 5$	13 on the outside of Cards 1, 3, 4 and 5
14	$2 + 3 + 4 + 5$	14 on the outside of Cards 2, 3, 4 and 5