Harder Riddles

The puzzles are marked with stars (★) that show the degree of difficulty of the given puzzle.

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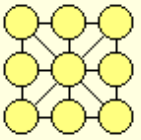
Digit Square ★★★

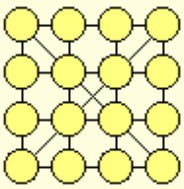


The digits 1, 2, 3, 4, 5, 6, 7, 8, and 9 must be put in the depicted square, in such a way that the sums of the numbers in each row, column, and diagonal are equal.

The Question: How should the numbers be arranged in the square?

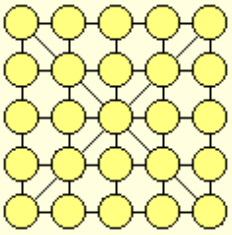
The Answer: *Click here!...*

Another Question: The numbers 1 up to 16 must be placed in the circles of the square depicted below, in such a way that the sum of the numbers in each row, column, and diagonal amounts to 34. How should the numbers be arranged in the square?



Another Answer: ***Click here!...***

Yet Another Question: The numbers 1 up to 25 must be placed in the circles of the square depicted below, in such a way that the sum of the numbers in each row, column, and diagonal amounts to 65. How should the numbers be arranged in the square**?**



Yet Another Answer: ***Click here!...***

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Four Fruits ☆☆

In a contest, four fruits (an apple, a banana, an orange, and a pear) have been placed in four closed boxes (one fruit per box). People may guess which fruit is in which box. 123 people participate in the contest. When the boxes are opened, it turns out that 43 people have guessed none of the fruits correctly, 39 people have guessed one fruit correctly, and 31 people have guessed two fruits correctly.

The Question: How many people have guessed three fruits correctly, and how many people have guessed four fruits correctly**?**

The Answer: ***Click here!...***

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The Last Word ☆☆

General Gasslefield, accused of high treason, is sentenced to death by the court-martial. He is allowed to make a final statement, after which he will be shot if the statement is false or will be hung if the statement is true. Gasslefield makes his final statement and is released.

The Question: What could he have said**?**

The Answer: ***Click here!...***

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Simple Sums ☆☆

The equation shown below is not correct:

5 + 5 + 5 = 550

The Question: Can you make the equation correct by placing just one stroke**?**

A Hint : Putting a stroke through the equal sign is an inventive solution, but not the one we are looking for**!**

The Answer: ***Click here!...***

Another Question: The equation shown below is not correct:

7 + 1 = 5 - 1

Can you make the equation correct by moving just one sign or digit to the other side of the equal sign**?**

A Hint : Note that 7-1=5+1 is *not* a correct solution because then you have moved *two* signs (exchanged the plus and minus signs).

Another Answer: ***Click here!...***

Yet Another Question: The equation shown below is not correct:

26 - 63 = 1

Can you make the equation correct by moving just one digit**?**

Yet Another Answer: ***Click here!...***

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Four Wise Words ☆☆

A long, long time ago, two Egyptian camel

drivers were fighting for the hand of the daughter of the sheik of Abbudzjabbu. The sheik, who liked neither of these men to become the future husband of his daughter, came up with a clever plan: a race would determine who of the two men would be allowed to marry his daughter. Therefore, the sheik organized a camel race. Both camel drivers had to travel from Cairo to Abbudzjabbu, and the one whose camel would arrive *last* in Abbudzjabbu, would be allowed to marry the sheik's daughter.

The two camel drivers, realizing that this could become a rather lengthy expedition, finally decided to consult the Wise Man of their village. Arrived there, they explained him the situation, upon which the Wise Man raised his cane and spoke four wise words. Relieved, the two camel drivers left his tent: they were ready for the contest!

The Question: Which four wise words did the Wise Man speak?

The Answer: ***Click here!...***

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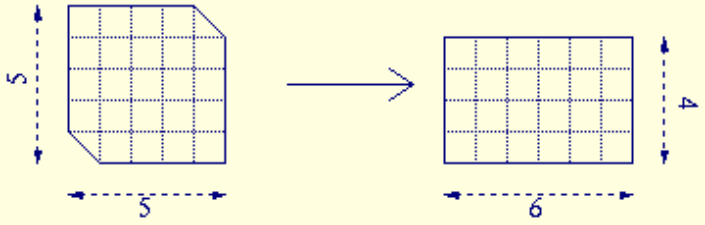
Dividing Paper ☆☆

A piece of paper of size 5 by 5 with two blunted corners should be divided into no more than two pieces (i.e. just one cut in total) and be rearranged into size 6 by 4 as shown in the figure below.



The Question: How should the paper be cut?

The Answer: ***Click here!...***

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Mirroring Clock ☆☆

A boy leaves home in the morning to go to school. At the moment that he leaves the house, he looks at the clock in the mirror. The clock has no number indication and for this reason, the boy makes a mistake in interpreting the time (mirror image). Just assuming the clock must be out of order, the boy cycles to school, where he arrives after twenty minutes. At that moment, the clock at school shows a time that is two and a half hours later than the time that the boy saw on the clock at home.

The Question: At what time did he reach school?

The Answer: ***Click here!...***

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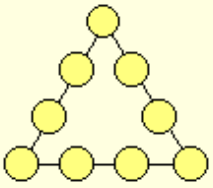
The Triangle ☆☆☆

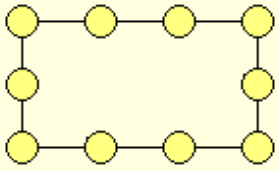


The numbers 1, 2, 3, 4, 5, 6, 7, 8, and 9 must be put in the depicted triangle, in such a way that the sums of the numbers on each side are equal.

The Question: How should the numbers be arranged in the triangle?

The Answer: ***Click here!...***

Another Question: The numbers 1 up to 10 must be placed in the rectangle below.



The sum of the numbers on each side must be exactly 18. How can this be done?

Another Answer: ***Click here!...***

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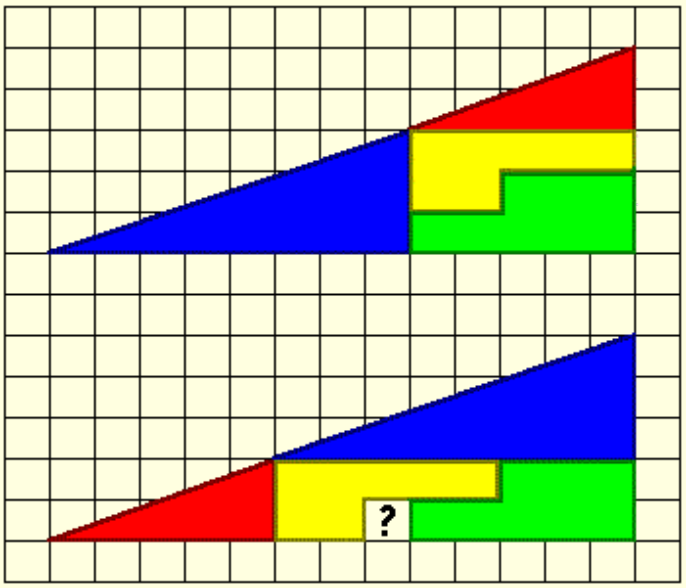
Appearing Area ☆☆☆

Consider the figures below. Both triangular figures have been built up from the same four parts. The parts with the same color have exactly the same shape and size! They are only moved around, which resulted in an appearing area in the lower figure, marked with a question mark ('?').



The Question: Where does the '**?**' hole come from**?**

The Answer: ***Click here!...***

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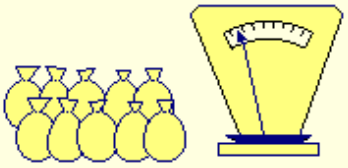
Weighing Marbles ☆☆☆



In front of you are 10 bags, filled with marbles. The number of marbles in each bag differs, but all bags contain ten marbles or more. Nine of the ten bags only contain marbles of 10 grams each. One bag only contains marbles of 9 grams. In addition, you have a balance which can weigh in grams accurate, and you are allowed to use it only once (i.e. weigh a single time).

The Question: How can you find out in one weighing, which bag contains the marbles of 9 grams**?**

The Answer: ***Click here!...***

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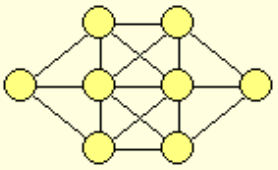
Number Net ☆☆ NEW

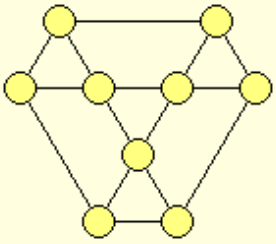


The numbers 1 up to and including 8 must be put in the circles of the depicted net. However, numbers in neighboring circles must differ by more than 1. For example, circles connected to a circle with a 4 may not contain a 3 or a 5.

The Question: How should the numbers be arranged in the circles of the net**?**

The Answer: ***Click here!...***

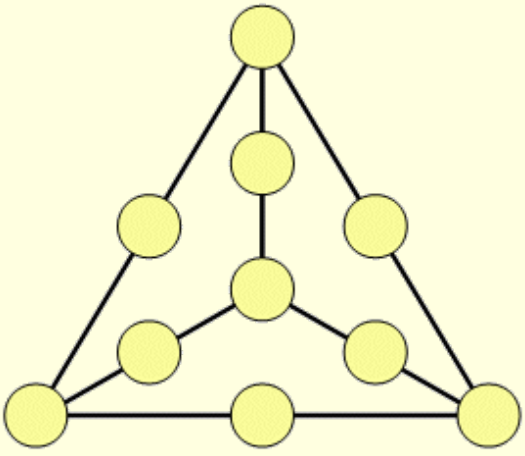
Another Question: The numbers 1 up to and including 9 must be put in the circles of the figure below, in such a way that the sum of the corners of each of the seven triangles (4 small ones and 3 large ones) is equal.



How should the numbers be put in the figure**?**

Another Answer: ***Click here!...***

Yet Another Question: The large triangle below consists of three smaller triangles. The numbers 1 up to 10 should be placed in the fields of the large triangle, such that the sum of the numbers in every small triangle is 28.



How should the numbers be placed in the triangle**?**

Yet Another Answer: ***Click here!...***

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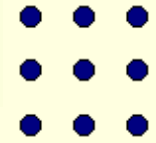
Nine Dots ☆☆



Nine dots are placed in three rows of each three dots, as shown in the picture. These nine dots must be connected by four straight, connected lines (i.e. without 'lifting up the pen' in between).

The Question: How should the four lines be drawn**?**

The Answer: ***Click here!...***

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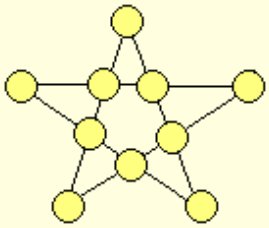
Number Star ☆☆

Given the following figure:



The numbers 16, 18, 20, 22, 24, 26, 28, 28, 32, and 36 need to be placed in the circles of the figure, in such a way that the sum of numbers of each line amounts to 100.

The Question: How can you do this**?**

The Answer: ***Click here!...***

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Dangerous Discoveries ☆☆☆

World explorer *Stan the Man* is on a dangerous adventure in the jungle. Suddenly an extremely poisonous snake bites him. Luckily, he has his medicines with him against this deadly snake poison:

two bottles, labeled A and B, containing three pills each. Exactly three times, with an interval of 2 hours, he needs to swallow simultaneously both a pill A and a pill B. In a rush, he takes a pill from bottle A and then shakes a pill from bottle B with it... However, unfortunately two pills B fall from the bottle and they look completely identical to pill A. He cannot tell which pill was A and which two are B pills... Stan is desperate: if he does not take the pills exactly as prescribed, it will be fatal.

The Question: How can Stan survive?

The Answer: ***Click here!...***

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Word Sums ★★★ NEW

In the additions below, all digits have been replaced by letters. Equal letters represent equal digits and different letters represent different digits.

```
RE + MI = FA
DO + SI = MI
LA + SI = SOL
```

The Question: What do the complete additions look like in digits?

The Answer: ***Click here!...***

Another Question: What about this one?

```
TWENTY
TWENTY
TWENTY
   TEN
   TEN
------ +
EIGHTY
```

Another Answer: ***Click here!...***

Yet Another Question: Thanks to Mike and Ruth VanderMeer from Canada, we can present you the following puzzle:

Four words add up to a fifth word numerically:

```
   mars
  venus
 uranus
 saturn
-------- +
neptune
```

Each of the ten letters (*m*, *a*, *r*, *s*, *v*, *e*, *n*, *u*, *t*, and *p*) represents a digit in the range 0 up to 9 (equal letters represent equal digits and different letters represent different digits). Furthermore, the digits 1 and 6 are being used most frequently.

What number does neptune represent**?**

Yet Another Answer: ***Click here!...***

The Fourth Question: What about this one**?**

```
 SEND
 MORE
----- +
MONEY
```

The Fourth Answer: ***Click here!...***

The Fifth Question: In the addition below, all digits have been replaced by letters. Equal letters represent equal digits and different letters represent different digits.

```
 ONE
DEUX
---- +
DREI
```

The digit 0 does not occur. What is the highest possible value for DREI**?**

The Fifth Answer: ***Click here!...***

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Clever Commuter ☆☆☆

Every day, Fred takes the train to travel from his work back to Alkmaar, his place of residence. Usually, he arrives at the station of Alkmaar at six o'clock, and exactly at that moment, his wife picks him up by car. Yesterday evening, Fred took an earlier train, without informing his wife, and therefore he already was at the

station of Alkmaar at five o'clock. He decided to walk part of the way to meet his wife. When he met the car with his wife, he drove home with her. In this way, they were home ten minutes earlier than normal. Fred's wife always drives the entire way between home and station at the same constant speed.

The Question: How long did Fred walk yesterday evening?

The Answer: ***Click here!...***

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Awkward Addition ★★★

In addition shown below, each of the letters A, B, C, D, and E represents one of the digits from 1 up to 5 (equal letters represent equal digits and different letters represent different digits). The first and last digits of the sum are given.

```
 ABCDE
 DABEC
 EAABC
 ACDAE
 ----- +
 9CBA0
```

The Question: What does the complete addition look like in digits?

The Answer: ***Click here!...***

Another Question: In the addition below, all digits have been replaced by letters. Equal letters represent equal digits and different letters represent different digits.

```
  ABCABA
  BBDCAA
  ABEABB
  ABDBAA
 ------- +
 AAFGBDH
```

What does the complete addition look like in digits?

Another Answer: ***Click here!...***

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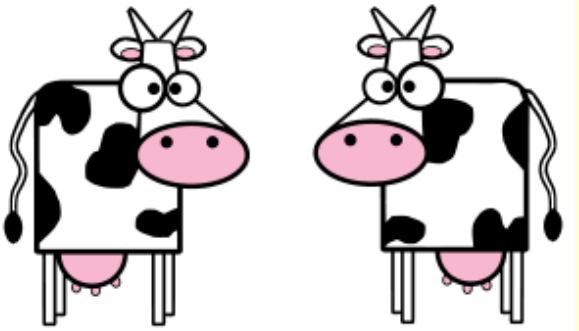
Crazy Cows ★★★

An old farmer died and left 17 cows to his three sons. In his will, the farmer stated that his oldest son should get $^1/_2$, his middle son should get $^1/_3$, and his youngest son should get $^1/_9$ of all the cows. The sons, who did not want to end up with half cows, sat for days trying to figure out how many cows each of them should get.



One day, their neighbor came by to see how they were doing after their father's death. The three sons told him their problem. After thinking for a while, the neighbor said: "I'll be right back!" He went away, and when he came back, the three sons could divide the cows according to their father's will, and in such a way, that each of them got a whole number of cows.

The Question: What was the neighbor's solution?

The Answer: ***Click here!...***

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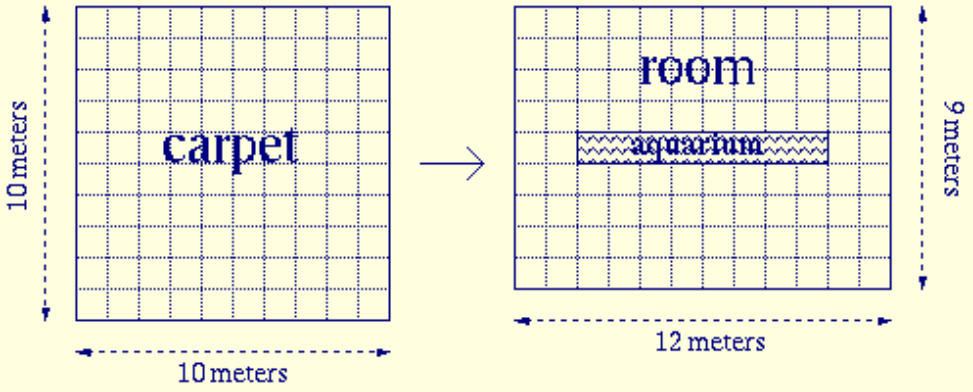
Carpet Cutting

A carpet of size 10 by 10 meters should be placed in a room of size 12 by 9 meters. In the center of the room, there is an aquarium of size 8 by 1 meters (see the figure below). The carpet should be cut into no more than two pieces (i.e. one cut in total).



The Question: How should the carpet be cut?

The Answer: ***Click here!...***

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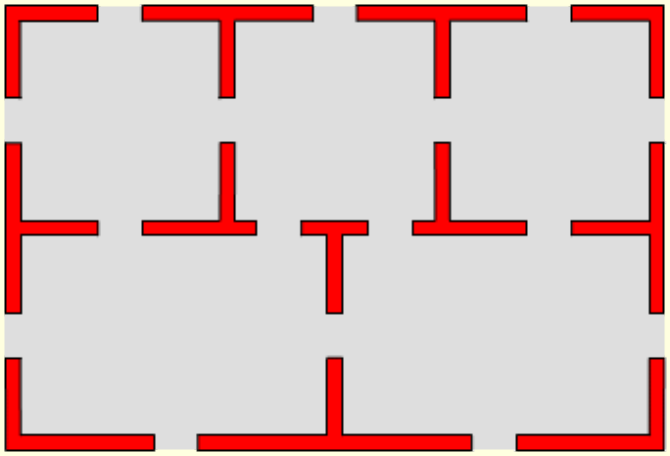
Running through the Rooms ★★★★



Have a look at the house plan at the right hand side, with five rooms and sixteen doors in total. The intention is to make a run through the rooms and pass each of the sixteen doors exactly once.

The Question: What is the route to run**?**

The Answer: ***Click here!...***

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Surprising Sequence ★★★★

2 9 3 1 8 4 3 6 5 7

The Question: What is the next term in this sequence**?**

The Answer: ***Click here!...***

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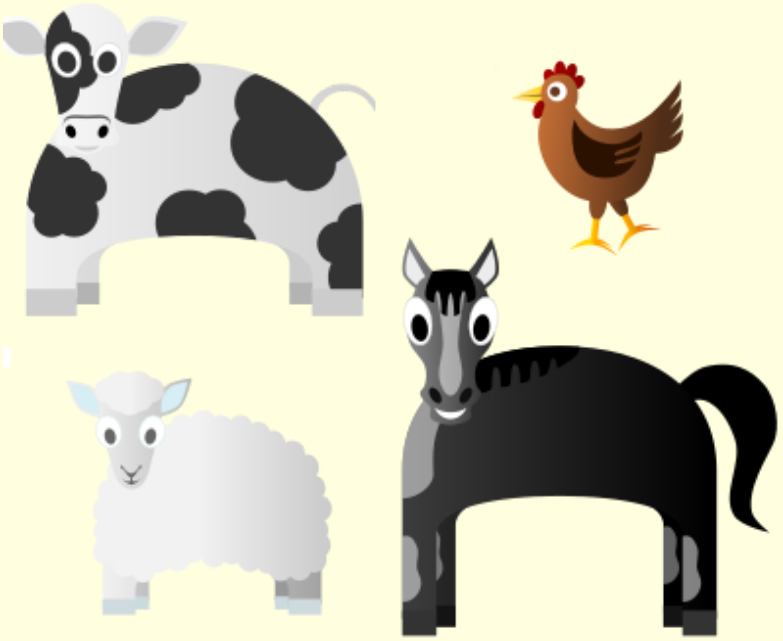
Acquiring Animals ★★★★

Peasant Marian wants to

buy new chickens, pigs, and horses. A new chicken costs 50 eurocents, a pig 3 euros, and a horse 10 euros. Peasant Marian has 100 euros with which she wants to buy exactly 100 animals, but in such a way, that she has at least one of each kind of animal.



The Question: How many animals must peasant Marian buy of each kind?

The Answer: ***Click here!...***

Another Question: A horse is worth as much as two bulls and one sheep.
A bull is worth as much as two cows.
Two cows are worth as much as five donkeys.
A donkey is worth as much as four sheep.
How many sheep is a horse worth?

Another Answer: ***Click here!...***

Yet Another Question: Farmer Axel has bought new cows and chickens. Together, the animals have 25 heads and 72 legs. How many cows and chickens did farmer Axel buy?

Yet Another Answer: ***Click here!...***

The Fourth Question: Peasant Anya has horses, cows, and sheep in her stable. We know the following:

- except four, all are horses;
- except four, all are cows;
- except four, all are sheep.

How many animals of each kind does peasant Anya have in her stable?

The Fourth Answer: ***Click here!...***

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☆☆

It's always 1 to 6,
it's always 15 to 20,
it's always 5,
but it's never 21,
unless it's flying.

The Question: What is this**?**

The Answer: ***Click here!...***

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Magic Square ☆☆☆☆

Given the following magic square:

18	99	86	61

Fill in the magic square, in such a way that the sum of the numbers in each row (horizontally, vertically, and diagonally) is 264, even if you hold the square upside down. You are only allowed to use the digits 1, 6, 8, and 9, and each number may appear only once in the square.

The Question: How should this be done**?**

The Answer: ***Click here!...***

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Painting Problems ☆☆☆☆

You have a painting with a string attached to it. The string is attached to the upper two corners of the painting. In the wall, there are two nails, horizontally next to each other. The string must be hung on the nails in such a way that the painting falls down if any of the two nails is pulled out of the wall. The painting must hang under the nails and must hang on the string.

The Question: How must the painting be hung**?**

The Answer: ***Click here!...***

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Gas, Water & Electricity ☆☆☆

There are three houses (A, B, and C) and three utilities (gas (G), water (W), and electricity (E)). Each house must get a direct, uninterrupted connection to each utility, but the various connections should not cross each other.

The Question: How must the connections be made**?**

The Answer: ***Click here!...***

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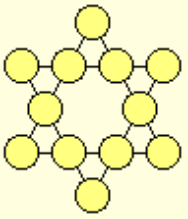
Super Number Star ☆☆☆☆☆

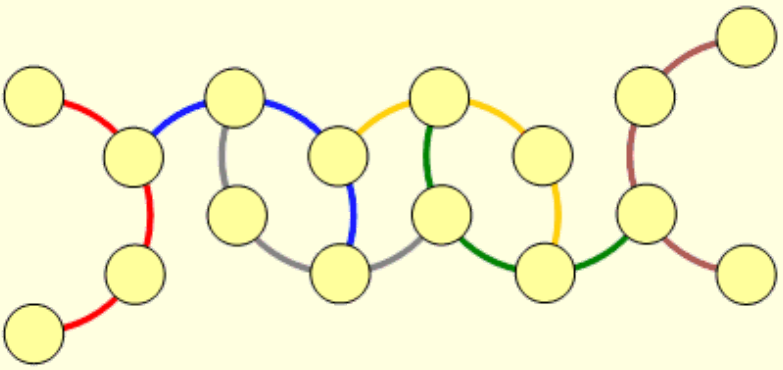


The numbers 1 up to 12 must be placed in the circles of the star shown on the right. The sums of the numbers in each row, and the sum of the numbers in the six outer circles of the star, must be equal 26.

The Question: How must this be done**?**

The Answer: ***Click here!...***

Another Question: In the figure below there are six curves (with different colors) that each connect four circles. The numbers 1 up to and including 16 must be entered in the circles in such a way that the sum of the circles on each of the six curves is 34.



How can you solve this?

Another Answer: ***Click here!...***

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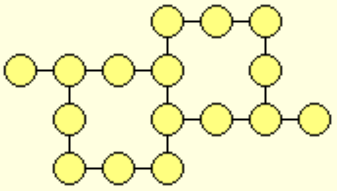
Seven Rows, Sixteen Numbers ★★★★★



In the figure on the right, you can fill in each of the sixteen numbers 1 up to 16, in such a way that the sum of the numbers in each of the seven rows is 29.

The Question: How should this be done?

The Answer: ***Click here!...***

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