Mario no Super Picross (Import) Picross Solving Strategy FAQ

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Picross Solving Strategies FAQ

(NOTE: If you use the 'Ctrl-F' feature, simply stick a ^ in front of the
number of the section you are looking for and search, you'll go straight to it
...so to go to Lesson2, type ^4)

Table Of Contents:

1.) Introduction/Purpose
2.) What IS a Picross anyway?
3.) Lesson1: Beginner Tactics
4.) Lesson2: Intermediate Tactics
5.) Lesson3: Advanced Tactics
6.) An Algorithmic, Structured Approach
7.) Quick Re-cap and Condensed Version *
8.) Contact, Info, Credits...and that stuff.

* - If you're only gonna read one section, and you know what a Picross is, make
it this section.

#--------------------------#
| ^1) Introduction/Purpose: |
#--------------------------#

Once, a long time ago I played a game known as "Mario's Picross". I didn't
think much of it back then - and hands down sucked at it to boot. A few years
later, I found this book called "Solitaire Battleships". It utilized all
of the principles of a Picross, except it had no timer. I solved all the
puzzles in the book within weeks, and then I remembered Mario's Picross.
Yet, search as I would, I could not find it anywhere, lost along with all
those other precious toys of the past.

I spent about four years wishing I could play a Picross puzzle again, and test
my mental power against one, and then I realized something: the principle
behind creating such a puzzle was so simple. I downloaded GameMaker 5.0, and
made ARPicross, my own personal re-incarnation of the game, with all the same
features as the standard Picross game. To go along with it, I made
ARPicrossMaker. Since then I've made over 100 Picross Puzzles, and solved all
of them. I've found people online to give me challenging puzzles and solved
those as well. Over the course of all this time, I've come up with tons of
tricks and techniques to solve a Picross puzzle effectively. This FAQ is my
way of passing these skills on to whomsoever wishes to have them.

#------------------------------#
| ^2) What IS a Picross anyway? |
#------------------------------#

If you are even looking at this FAQ, there's a pretty good chance that you
already know what a Picross puzzle is. Still, a Picross is a kind of logic
puzzle. It originated in Japan, and made its debut in newspapers. Later it
collided with technology and gave us the modern-day Picross experience.
```

But I digress, as I said earlier a Picross is a logic puzzle. Like Minesweeper, it consists of a grid in which there are two kinds of spaces (mines/non-mines). Your goal is to identify all the squares that are of one type or the other. Unlike minesweeper, however, all of the 'clues' that you are going to get are given to you as soon as the round begins. At the front of each row and top of each column there is a number or series of numbers. These numbers indicate the number of 'on' spaces and their grouping. Using logical deduction, and multiple other techniques, you must use these clues on the top and side and uncover all the 'on' squares - which typically resemble some pattern or picture.

There is a third aspect of the Picross puzzle, and that is the timer. You begin with a set amount of time in which you must complete the puzzle. This, however, is usually a LOT more time than you'll actually need. The timer becomes a factor, then, when it comes to errors. If you try to turn a square 'on' that is not meant to be 'on', you suffer a time penalty. Get too many of these and you lose - quick.

^3.) Lesson1: Beginner Tactics

If you're reading this FAQ before ever having tried to solve a Picross, then I advise you just try working through a few by yourself. Odds are you'll pick up some of the tactics I outline in this section by yourself, but even if you don't, you'll at least see my reason for picking them...that, and my diagrams will be easier to understand.

Done? Okay, then lets move on to what I consider Beginner Tactics.

Key:
# = Unknown
X = On
O = Off
_ = Spacer for GFaqs formatting (ignore it)

So, here we have a sample picross. Here's the solution:

X_X_X_X_X_X_X_X_X_X
X_X_X_X_O_O_O_O_O_O
X_O_O_O_O_O_O_O_O_O
X_O_O_O_O_O_O_O_O_X
X_O_O_O_O_O_O_O_O_X
X_X_X_X_O_O_O_O_O_X
X_O_O_O_O_O_O_O_O_O
X_X_X_O_O_O_O_O_O_X
X_O_O_O_X_O_X_O_X_O
X_X_X_O_X_X_O_O_O_X

When you start, you'll see something like this:
_____2_2_2_1_1_1_1_1_1
_____1_1_1_2_1_1___1_3
_____1_1_____________1
_____10_1_1__________1
10____#_#_#_#_#_#_#_#_#_#
4_____#_#_#_#_#_#_#_#_#_#
1_____#_#_#_#_#_#_#_#_#_#
1-1___#_#_#_#_#_#_#_#_#_#
1-1___#_#_#_#_#_#_#_#_#_#
4-1___#_#_#_#_#_#_#_#_#_#
1_____#_#_#_#_#_#_#_#_#_#

```
3-1____#_#_#_#_#_#_#_#_#_#
1-1-1-1#_#_#_#_#_#_#_#_#_#
3-2-1__#_#_#_#_#_#_#_#_#_#
```
<fig.1>

>>>TACTIC #1: Full Rows are Free Rows...so are empty ones!

Count the total number of 'possible' squares you can mark, ten right? Now check the number in the clue - ten. This is a full row, it is impossible for any of those squares to be 'off', or else we'd have less than ten. So mark them all :). The same principle applies to empty rows, or rows with '0' squares. It's impossible for there to be any marked squares, so there must be none. Mark them all as off. But 'what!?' you say. "Why mark squares as 'off'? Don't we only haveto find the 'on' squares?" Well, yes, that is true, but if we were to know ALLthe off squares, wouldn't we - almost 'automatically' know all the on squares? When solving a Picross, you never know what piece of information you will need to know, which brings us to our next tactic:

>>>TACTIC #2: Always Mark Everything you Know as 'On' on and 'Off' off
---

You never know when some 'random' bit of information will help you out. Let's look at that puzzle again, and apply Tactic #1 to it:

```
__________2_2_2_1_1_1_1_1_1
__________1_1_1_2_1_1___1_3
__________1_1_____________1
______10_1_1_____________1
10_____X_X_X_X_X_X_X_X_X_X
4______X_#_#_#_#_#_#_#_#_#
1______X_#_#_#_#_#_#_#_#_#
1-1____X_#_#_#_#_#_#_#_#_#
1-1____X_#_#_#_#_#_#_#_#_#
4-1____X_#_#_#_#_#_#_#_#_#
1______X_#_#_#_#_#_#_#_#_#
3-1____X_#_#_#_#_#_#_#_#_#
1-1-1-1X_#_#_#_#_#_#_#_#_#
3-2-1__X_#_#_#_#_#_#_#_#_#
```
<fig.2>

That's a lot of information...and we can take it even further! If we've found everything in any given row/column, then we can eliminate the rest of that row/column as off, right? That is to say, take a look at the fourth-to-bottom row. It says there's one 'on' square and nothing more in the row. Well, we have found that one 'on' square and marked it 'on'. So there can be NOTHING else in that row, correct?

>>>TACTIC #3: When you've found what's there, eliminate the rest.

Let's apply this tactic:

```
__________2_2_2_1_1_1_1_1_1
__________1_1_1_2_1_1___1_3
__________1_1_____________1
______10_1_1_____________1
```

```
10_____X_X_X_X_X_X_X_X_X_X
4______X_#_#_#_#_#_#_O_#_#
1______X_O_O_O_O_O_O_O_O_O
1-1____X_#_#_#_#_#_#_O_#_#
1-1____X_#_#_#_#_#_#_O_#_#
4-1____X_#_#_#_#_#_#_O_#_#
1______X_O_O_O_O_O_O_O_O_O
3-1____X_#_#_#_#_#_#_O_#_#
1-1-1-1X_#_#_#_#_#_#_O_#_#
3-2-1__X_#_#_#_#_#_#_O_#_#
```
<fig.3>

Here's the final basic tactic, which actually transitions into intermediate tactics pretty well. Take a look at the second row. It has exactly four 'on' spaces. Furthermore, since it was written "4" and not "2 2" or "1 2 1" or something, we know that the four 'on' squares MUST be connected. Well, it just so happens that it's IMPOSSIBLE to be connected to the left of the one 'on' square we have found, because that's the edge of the puzzle grid - right? So, that means that the four connected on squares must be starting from the point we have found and moving on right. By analyzing the GROUPING of 'squares' indicated by the clues, we were able to find their location.

>>>TACTIC #4: Use the GROUPING of squares to find their location

---

The same technique can also be applied in reverse. Look at the fourth row. We know that that first square is a 'one' (because there are no other kinds of squares in that row except for squares that belong to a group of one). Since we know this, it logically follows that NO other square can be connected to it, as that would change the grouping to '2' instead of '1 1'. So, we can mark the squares (or in this situation, 'square') surrounding it as off.

Let's apply these tactics, and see what we find.

(Step 1)

```
_________2_2_2_1_1_1_1_1_1
_________1_1_1_2_1_1___1_3
_________1_1_____________1
______10_1_1_____________1
10_____X_X_X_X_X_X_X_X_X_X
4______X_X_X_X_O_O_O_O_O_O
1______X_O_O_O_O_O_O_O_O_O
1-1____X_O_#_#_#_#_#_O_#_#
1-1____X_O_#_#_#_#_#_O_#_#
4-1____X_X_X_X_#_#_#_O_#_#
1______X_O_O_O_O_O_O_O_O_O
3-1____X_X_X_#_#_#_#_O_#_#
1-1-1-1X_O_#_#_#_#_#_O_#_#
3-2-1__X_X_X_#_#_#_#_O_#_#
```
<fig.4>

(Step 2)

```
_________2_2_2_1_1_1_1_1_1
_________1_1_1_2_1_1___1_3
_________1_1_____________1
______10_1_1_____________1
10_____X_X_X_X_X_X_X_X_X_X
```

```
4_____X_X_X_X_O_O_O_O_O_O
1_____X_O_O_O_O_O_O_O_O_O
1-1___X_O_#_#_#_#_#_O_#_#
1-1___X_O_#_#_#_#_#_O_#_#
4-1___X_X_X_X_O_#_#_O_#_#
1_____X_O_O_O_O_O_O_O_O_O
3-1___X_X_X_O_#_#_#_O_#_#
1-1-1-1X_O_#_#_#_#_#_O_#_#
3-2-1__X_X_X_O_#_#_#_O_#_#
<fig.5>
```

That's as far as we can get using only basic, beginner tactics. Let's move on to intermediate tactics now, and finish this puzzle.

```
#-----------------------------------#
| ^4.) Lesson2: Intermediate Tactics |
#-----------------------------------#
```

Alright. This is where the REAL skills kick in. The beginner tactics are really nothing more than basics, this is the real stuff right here. Let's pull up the puzzle, as far as we had it completed so far:

```
_________2_2_2_1_1_1_1_1_1
_________1_1_1_2_1_1___1_3
_________1_1_____________1
______10_1_1_____________1
10_____X_X_X_X_X_X_X_X_X_X
4_____X_X_X_X_O_O_O_O_O_O
1_____X_O_O_O_O_O_O_O_O_O
1-1___X_O_#_#_#_#_#_O_#_#
1-1___X_O_#_#_#_#_#_O_#_#
4-1___X_X_X_X_O_#_#_O_#_#
1_____X_O_O_O_O_O_O_O_O_O
3-1___X_X_X_O_#_#_#_O_#_#
1-1-1-1X_O_#_#_#_#_#_O_#_#
3-2-1__X_X_X_O_#_#_#_O_#_#
<fig.6>
```

Now, the trick i'm gonna introduce you to is 'counting it out'. Cram everything as close as you can to one end and 'visualize' where it'll be. Look at the last column in the picross (1-3-1-1). Pretend it was oriented horizontally, it'd look something like this:

```
_________1234567890
1-3-1-1| XOO###O###
```

Now here goes the 'counting' technique. Start '1'....that's on spot 1 - we know that already. Where do we start counting out the three now? We have to cram it as far to the left as possible, right? Well, we can't start in spot '2' because it's right next to the 1, and these two have to be seperate. Ordinarily, we'd start at '3', but in this case we can't do that because we marked '3' as off. It doesn't even matter WHY space 3 is off, it's sufficient to know that it is. That's why you always write down everything you know (Tactic2). Anyways, we now count the three off starting at space 4. 4-5-6, that's the CLOSEST to the left that it's possible to compress the 3. Now there's a '1'...closest to the left would be space '8', leave a space so that it's disconnected from whatever comes next, and then place the last 1, it'd be at '0'. That's the farthest left they all could be, right? Well, since they're "packed" it's also the farthest right they could be. It may not be a 'full' line, but the line is as full as it can

be. You now know where all the 'on' squares are in this column! Let's update
our puzzle using our 'updated' tactic:

>>>TACTIC #1: Any row in which all the 'on' squares can only fit in one
____updated___pattern is a free row... Mark all 'on' squares on and 'off' off.

```
_________2_2_2_1_1_1_1_1_1
_________1_1_1_2_1_1___1_3
_________1_1_____________1
______10_1_1_____________1
10_____X_X_X_X_X_X_X_X_X_X
4______X_X_X_X_O_O_O_O_O_O
1______X_O_O_O_O_O_O_O_O_O
1-1____X_O_#_#_#_#_#_O_#_X
1-1____X_O_#_#_#_#_#_O_#_X
4-1____X_X_X_X_O_#_#_O_#_X
1______X_O_O_O_O_O_O_O_O_O
3-1____X_X_X_O_#_#_#_O_#_X
1-1-1-1X_O_#_#_#_#_#_O_#_O
3-2-1__X_X_X_O_#_#_#_O_#_X
```
<fig.7>

(Now apply Tactic2/3 (mark all you know))

```
_________2_2_2_1_1_1_1_1_1
_________1_1_1_2_1_1___1_3
_________1_1_____________1
______10_1_1_____________1
10_____X_X_X_X_X_X_X_X_X_X
4______X_X_X_X_O_O_O_O_O_O
1______X_O_O_O_O_O_O_O_O_O
1-1____X_O_O_O_O_O_O_O_O_X
1-1____X_O_O_O_O_O_O_O_O_X
4-1____X_X_X_X_O_O_O_O_O_X
1______X_O_O_O_O_O_O_O_O_O
3-1____X_X_X_O_O_O_O_O_O_X
1-1-1-1X_O_#_#_#_#_#_O_#_O
3-2-1__X_X_X_O_#_#_#_O_O_X
```
<fig.8>

You'll notice (or perhaps you didn't, and got confused ;) that while scanning
through the puzzle and filling it out, I've not used only one set of clues.
I used the clues both on the top and on the side. By integrating and switching
between them over and over, you get a fuller idea of the puzzle. Look at the
monumental difference between figures 7 and 8. See how MUCH we figured out? It
all happened because we figured out one column using the 'top' clues, and then
we TOOK THAT INFORMATION TO THE FULLEST by integrating it with the 'side'
clues. Using the clues in conjunction, we were able to 'uncover' almost all the
on squares.

>>>TACTIC #5: Switch your orientation from side to top or top to side every
_____________time you uncover a new square - on or off.

Anyway, now we're gonna switch back to the vertical, and apply
tactics 1, 2 and 3 again:

```
_________2_2_2_1_1_1_1_1_1
_________1_1_1_2_1_1___1_3
_________1_1_____________1
______10_1_1_____________1
10_____X_X_X_X_X_X_X_X_X_X
4______X_X_X_X_O_O_O_O_O_O
1______X_O_O_O_O_O_O_O_O_O
1-1____X_O_O_O_O_O_O_O_O_X
1-1____X_O_O_O_O_O_O_O_O_X
4-1____X_X_X_X_O_O_O_O_O_X
1______X_O_O_O_O_O_O_O_O_O
3-1____X_X_X_O_O_O_O_O_O_X
1-1-1-1X_O_O_O_X_#_#_O_X_O
3-2-1__X_X_X_O_X_#_#_O_O_X
```
<fig.9>

Switching sides!

```
_________2_2_2_1_1_1_1_1_1
_________1_1_1_2_1_1___1_3
_________1_1_____________1
______10_1_1_____________1
10_____X_X_X_X_X_X_X_X_X_X
4______X_X_X_X_O_O_O_O_O_O
1______X_O_O_O_O_O_O_O_O_O
1-1____X_O_O_O_O_O_O_O_O_X
1-1____X_O_O_O_O_O_O_O_O_X
4-1____X_X_X_X_O_O_O_O_O_X
1______X_O_O_O_O_O_O_O_O_O
3-1____X_X_X_O_O_O_O_O_O_X
1-1-1-1X_O_O_O_X_O_X_O_X_O
3-2-1__X_X_X_O_X_X_O_O_O_X
```
<fig.10>

And Finis!!!! If you can't follow how we got from the start of this picross to the solution, then go back and try to solve it for yourself, or just try following along with the pictures.

Now here's our new Picross to solve:

```
OOXXOOO
XXXOOOO
OOOXXXO
XOXOOOX
XOXOXXO
XXXXOOO
OOOXXXX
```

```
_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
2____#_#_#_#_#_#_#
3____#_#_#_#_#_#_#
3____#_#_#_#_#_#_#
1-1-1#_#_#_#_#_#_#
1-1-2#_#_#_#_#_#_#
4____#_#_#_#_#_#_#
4____#_#_#_#_#_#_#
```
<fig.11>

If you look at this, you'll find that it defies every method of picross solving that we've discussed so far. So it's time to introduce you to a new tactic. Remember how we counted out earlier? Well that's part of this tactic. We take both extremes, and the overlap must be real. Okay, enough mumbo jumbo take a look at the bottom row:

```
__1234567
4|#######
```

What's the most EXTREME left it could be? Spaces 1-4 right? And the most extreme right would be spaces 4-7. Like so:

```
Left Extreme: 4|XXXX###
Right Extreme:4|###XXXX
Overlap:________###X###
```

Now, granted, it could be anywhere in between, but no matter what spaces you choose, if the EXTREMES overlap, so must the actual position of the '4'.

```
---------------
>>>TACTIC #6: If the extremes of possible 'on' squares overlap, the overlap
_____________must be 'on'
---------------
```

Of course, you need not have only one number to use tactic6. Look at column 3 ... and imagine it oriented sideways.

```
____1234567
2-3|#######
```

Apply the extremes tactic to the '3'.

```
Extreme left : XX#XXX#
Extreme right: XX##XXX
Overlap------->____XX_
```

Now apply the extremes tactic to the '2'.

```
Extreme left : XX##XXX (notice: since we KNOW the 3 has to be to the right
Extreme right: #XX#XXX   of 2 we push it off to the right as much as possible)
Overlap------->_X_____
Combine Overlaps> _X__XX_
```

We can even do it with 3 numbers... look at row 5 of figure 11.

```
1-1-2|#######
X Lt: X#X#XX#
X Rt: X#X##XX
Over: _____X_
```

Clearly, this is a VERY useful tactic. Alright, let's apply it to our puzzle!

```
_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
2____#_#_#_#_#_#_#
3____#_#_X_#_#_#_#
3____#_#_#_#_#_#_#
1-1-1#_#_#_#_#_#_#
1-1-2#_#_X_#_#_X_#
4____#_#_X_X_#_#_#
```

```
4____#_#_#_X_#_#_#
```
<fig. 12>

Ahh...now, i'd love to jump the gun and solve this puzzle, but let's work through it systematically, there are two more incredibly useful tactics that belong in this intermediate section.

>>>TACTIC #7: Use counting out to identify which number in the clues each 'on' _____square belongs to.

Look at row 5 in figure 13:

```
_______1234567
1-1-2| ##X##X#
```

What number is that first X? It could be a 1 or a 2, as both are in this row. Well, there's an easy way to tell...we discussed it earlier...counting out. If the first 'X' were indeed a '2', that would mean there are two '1s' to the left of it. Assume space1 is a '1', space2 would have to be blank, and then space3 would be a '1'... it's impossible to cram that many '1s' before space3, so by IDENTIFYING the 'X' as a '1', we can now mark squares 2 and 4 as 'off'. After all, since it's a 1, there is no way it can be connected to anything.

The other tactic is much easier to understand and use... I call it 'bounding'. Once you've identified an 'on' square as part of a number, you know exactly how far it can stretch in each direction. And if there is no other number in that row, then you can mark all the squares that are out-of-bounds as off. That sounds confusing, so let's give an example of this Tactic, but first...

>>>TACTIC #8: If you can identify an on square as belonging to a certain _____number, then bound as possible.

Look at Row 2 in figure 12

```
__1234567
3|##X####
```

Since there's no other number in this row, we know that the 'X' must be 3 spaces long. The leftmost extreme is (1-3) and rightmost extreme (3-5). The BOUNDary spaces are 1 and 5....so we BOUND it by 3, and we find:

```
3|##X##OO
```

Another example, row 6
```
4|##XX###
```

Bound it by four and you get:
```
4|##XX##O
```

As you can see, this is an incredibly strong tactic...and the smaller the clue number is, the more information this tactic will give you. However, there's a warning that goes with this technique, look at column4:

```
1-1-2|#####XX
```

On first glance, we look and can tell immediately that the two on squares must

be the '2', but we can't bound this, nor can we mark the rest of the column as off, because there are still two more 'on' squares to be found - the two 1s. Still, we've identified the two, so at the very least we can mark space5 as off:

1-1-2|####OXX.

Alright! New, powerful tactics in hand, let's apply them:

```
_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
2____#_#_#_#_#_#_#
3____#_#_X_#_#_O_O
3____#_#_#_#_#_#_#
1-1-1#_#_#_#_#_O_#  (6= notice, i used the 'extremes' tactic (#6) here)
1-1-26_O_X_O_#_X_#
4____#_#_X_X_#_O_O
4____#_#_#_X_#_#_#
<fig. 13>

_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
2____#_#_#_#_#_#_#
3____#_#_X_#_#_O_O
3____#_#_#_#_#_#_#
1-1-1#_#_#_#_#_O_#  (6= notice, i used the 'extremes' tactic (#6) here)
1-1-2X_O_X_O_#_X_#
4____#_6_X_X_#_O_O
4____#_O_#_X_6_6_#
<fig. 14>

_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
2____#_#_#_#_#_#_#
3____#_#_X_#_#_O_O
3____#_#_#_#_#_#_#
1-1-1#_#_#_#_#_O_#
1-1-2X_O_X_O_#_X_#
4____X_X_X_X_O_O_O
4____#_O_#_X_X_X_#
<fig. 15>

_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
2____#_#_#_#_#_#_#
3____#_#_X_#_#_O_O B= Off, by bounding.
3____O_#_#_#_#_#_# 3= On, by tactic 3.
1-1-13_#_#_#_#_O_#
1-1-2X_O_X_O_#_X_#
4____X_X_X_X_O_O_O
4____B_O_#_X_X_X_#
<fig. 16>

_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
```

```
2____#_#_#_#_#_#_#
3____#_#_X_#_#_O_O
3____O_#_#_#_#_#_#
1-1-1X_O_#_#_#_O_#
1-1-2X_O_X_O_#_X_#
4____X_X_X_X_O_O_O
4____O_O_#_X_X_X_#
<fig. 17>
```

A powerful toolkit, no doubt. We're significantly closer to the solution, and considering that we couldn't even start this puzzle with our original set of tactics, it seems we've come a long way indeed. The problem we have now is that the puzzle is actually unsolvable. At least...unsolvable without using the 'advanced' technique of using 'hedged bets' or guessing. In picrosses, you usually have enough time to spare for at least 5 guesses. A hedged bet is designed to get the best use out of these guesses...and to only be used when necessary.

```
#---------------------------------#
| ^5.) Lesson3: Advanced Tactics  |
#---------------------------------#
```

Frankly advanced tactics is a bit of a misnomer. The only really effective technique to use here is the 'hedged bet'. When you make a hedged bet, you have to be able to say "If i'm wrong, i'll get a LOT of information". That way, if you're right, and get next to no information, you don't LOSE anything, but if you are wrong, and you lose some time, you get a LOT of information - enough to speed you up considerably. Let's pull back fig.17 real quick:

```
_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
2____#_#_#_#_#_#_#
3____#_#_X_#_#_O_O
3____O_#_#_#_#_#_#
1-1-1X_O_#_#_#_O_#
1-1-2X_O_X_O_#_X_#
4____X_X_X_X_O_O_O
4____O_O_#_X_X_X_#
<fig. 17>
```

We can't go any further with 'sure' knowledge, it's time to make a guess. The 'hedged bet' right now would be to take the middle of row 3. Why? There are 2 reasons.

1.) You have a 3/4 chance of being right (OXXX### O#XXX## O##XXX# not O###XXX)
2.) If you are wrong, you get 3 'ons', which in turn will give you an entire column, and then you can use that information to mark off 2 half-rows.

```
---------------
>>>TACTIC #9: If there's nothing certain, and you must guess, then make your
_____________guess such that being WRONG is extremely valuable, information
_____________wise and that being RIGHT is extremely likely, probability wise.
_____________The closer to that ideal you can be, the better your hedged bet.
---------------
```

So, we take our guess, and it turns out we were right:

```
_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
```

```
___________2_1_1__
2____#_#_#_#_#_#_#
3____#_#_X_#_#_O_O
3____O_#_#_X_#_#_#
1-1-1X_O_#_#_#_O_#
1-1-2X_O_X_O_#_X_#
4____X_X_X_X_O_O_O
4____O_O_#_X_X_X_#
```
<fig. 18>

Using all the previously discussed techniques, we'll get:

```
_____1_1_2_1_1_1_1
_____3_1_3_1_1_1_1
___________2_1_1__
2____O_O_X_X_O_O_O
3____X_X_X_O_O_O_O
3____O_O_O_X_X_X_O
1-1-1X_O_X_O_O_O_X
1-1-2X_O_X_O_X_X_O
4____X_X_X_X_O_O_O
4____O_O_O_X_X_X_X
```
<fig. 19>

Finish!...What?! You don't see how? :). I was kind of hoping you'd say that. I assure you, it's relatively easy by using the techniques discussed in Lessons One and Two....it just takes practice to get quick at using them.

Other Techniques
----
* Coming Soon: Bouncing off the wall: 4|##X#### ->> 4|##XX###

The only other extremely sophisticated technique is to try to interpret and see patterns in the 'on' squares. Since picrosses are - by and large - symbols, pictures, or patterns, having a sharp eye for them can give you an 'intuitive' advantage.

If you sharpen your intuition, then don't be scared to follow it, especially if you have enough 'guesses/mistakes' to make up for it when it goes wrong.

^6.) An Algorithmic Approach

As a computer scientist, I'm always seeking a simple, robust, 'one solution fits all' method to do things. You've not mastered something till you can teach someone else to do it, and you've not mastered teaching till you can get a computer to do it.

Well, I haven't made an algorithm or anything so fancy to solve picrosses; but I have come up with a single, structured way to take on a picross puzzle-from beginning to end-that is likely to succeed.

Here it goes, the Step-by-Step Picross solver. This method pre-supposes a grid of size 12x12. It can (obviously) be adapted for any size, but understand that the proportions are with this gridsize in mind.

1.) Find the 'biggest' or 'fullest' line.

#------------------#
| ^7.) Quick Recap |
#------------------#

For those of you too lazy to read the whole FAQ, I've taken all the "Tactics"
and just summarized them into a nice series of bullet points. Read Section6
when you're done here, and you'll be good.

Tactics:
++
| TACTIC #1:
| Any row in which all the 'on' squares can only fit in one
| pattern is a free row... Mark all 'on' squares on and 'off' off.
|
| TACTIC #2:
| Always Mark Everything you Know as 'On' on and 'Off' off
|
| TACTIC #3:
| When you've found what's there, eliminate the rest.
|
| TACTIC #4:
| Use the GROUPING of squares to find their location
|
| TACTIC #5:
| Switch your orientation from side to top or top to
| side every time you uncover a new square - on or off.
|
| TACTIC #6:
| If the extremes of possible 'on' squares overlap, the overlap must be 'on'
|
| TACTIC #7:
| Use counting out to identify which number in the clues each 'on'square
| belongs to.
|
| TACTIC #8:
| If you can identify an on square as belonging to a certain number,
| then bound as possible.
|
| TACTIC #9:
| If there's nothing certain, and you must guess, then make your
| guess such that being WRONG is extremely valuable, information
| wise and that being RIGHT is extremely likely, probability wise.
| The closer to that ideal you can be, the better your hedged bet.
++

If there's some term I used that you don't understand, or these are too concise
for you, then just do a text search for >>>TACTIC #_   (replacing _ with the #)
and you'll find that tactic better explained and with examples in context.

I hope you enjoyed this FAQ and learned something from it. Go beat a picross!

Wait! What's that? You don't have a Picross to own? Well, that's okay. Read on
down to the last section.

#-----------------------------#
| ^8.) Contact Info, Credits |
#-----------------------------#

Yar. First my contact info:

Send me an e-mail, That address is ahmadrasheed [at] gmail.com. You'll get a hold of me fairly quick that way. My AIM account is BountyHunterSAx...u may catch me there. Also, I freqent the BN3 Blue Messageboard so meet me there too.

Second, Credits.

* I'd like to thank the genius in Japan who came up with what could truly be called one of the best

Third, Don't have a Picross to solve?!?!?!

E-Mail me: AhmadRasheed [at] gmail.com

I'll E-mail you my own personal copy of (ARPicross) invented and copyrighted by me. I'll even include 100+ puzzles to get you started and a PicrossMaker to go with the Picross program. Just ask.

Lastly, copyright information:

Wanna host this somewhere? I would be AWED and AMAZED. So that means you will probably get my FULL permission to copy ALL of it, edit it, and do whatever. You must, however, e-mail me at (ahmadrasheed[at]gmail.com) for permission. Don't say that you made it, and then give me a link via AIM, a post on the BN3 Board, or my e-mail.

Alright, I'm done....