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# Y-Wing Strategy

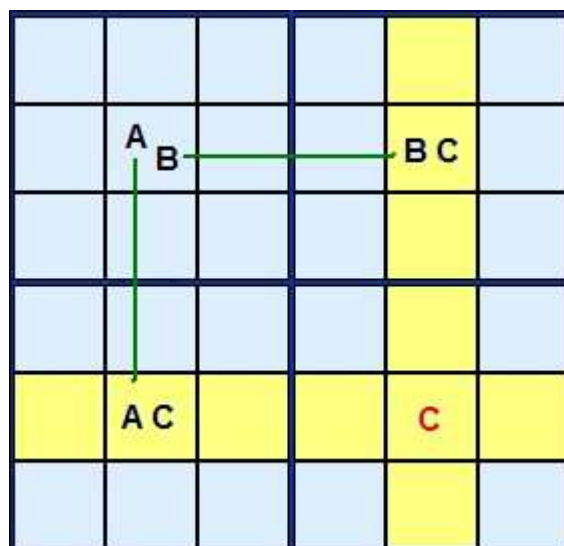
From sudokuwiki.com, the puzzle solver's site

2		
	3	6
5		7

This is an excellent candidate eliminator. The name derives from the fact that it looks like an X-Wing - but with three corners, not four. The forth corner is where the candidate can be removed but it leads us to much more as we'll see in a minute.

Lets look at Figure 1 for the theory.

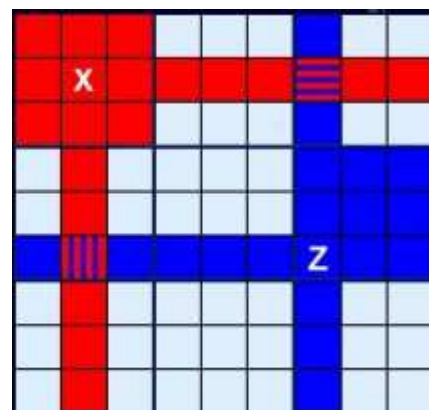
**A**, **B** and **C** are three different candidate numbers in a rectangular formation. Three of the corners have two candidates **AC**, **AB** and **BC**. The cell marked **AB** is the key. If the solution to that cell turns out to be **A** then **C** will definitely occur in the lower left corner. If **AB** turns out to be **B** then **C** is certain to occur in the top right corner. **C** is a *complementary pair*.



Y-Wing Figure 1

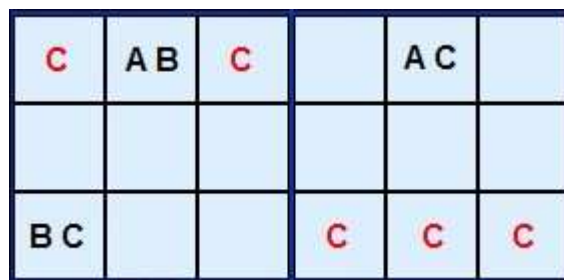
So whatever happens, **C** is certain in one of those two cells marked **C**. The red **C** can be 'seen' by both **C**s - the cell is a confluence of both **BC** and **AC**. Its impossible for a **C** to live there and it can be removed.

In Figure 2 I'm demonstrating the sphere of influence two example cells have, marked red and blue. **X** can 'see' all the red cells, **Z** can 'see' all the blue ones. In this case there are two cells which overlap and these are 'seen' by both.



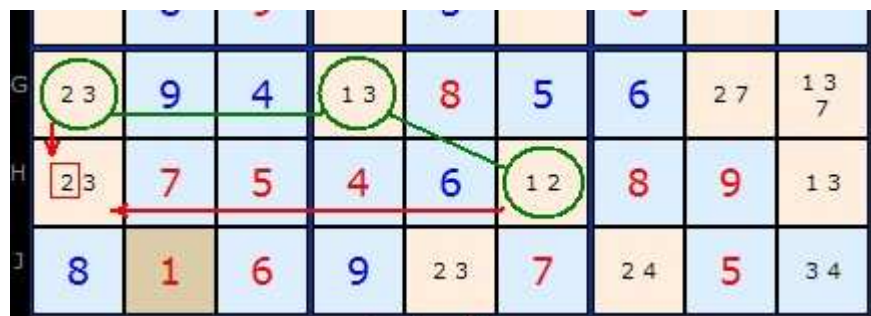
Y-Wing Figure 2

If our **A**, **B** and **C** are aligned more closely they can 'see' a great deal more cells than just the corner of the rectangle they make. In Figure 3 **BC** can see **AB** because they share the same box. **AC** can see **AB** because they share the same row. **BC** and **AC** can see all the cells marked with a red **C** where this Y-Wing can eliminate whatever number **C** is.



Y-Wing Figure 3

In this first example we have lots of 1s, 2s and 3s, but three cells - marked in green rings - form a Y-Wing. The two 2s on the end form the pincer - one of them must be a 2. Therefore the 2 marked in a red box can be eliminated.



Y-Wing Example 1: [Load Example](#)

### Y-Wing Example 2: Load Example

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