Picture Puzzles

UNSEEN TRIANGLES

Picture Puzzles

Picture Puzzles

Creator ... Doug. Williams
Publisher ... Mathematics Centre

This Picture Puzzle is based on
... Task 179, Unseen Triangles
Teaching Notes
... mathematicscentre.com/picturepuzzles/teachingnotes.htm

Picture Puzzles

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To Do

1. Find your own way to connect triangles & matches.
2. Explain other ways to connect triangles & matches.
3. Calculate using your own way and other ways.

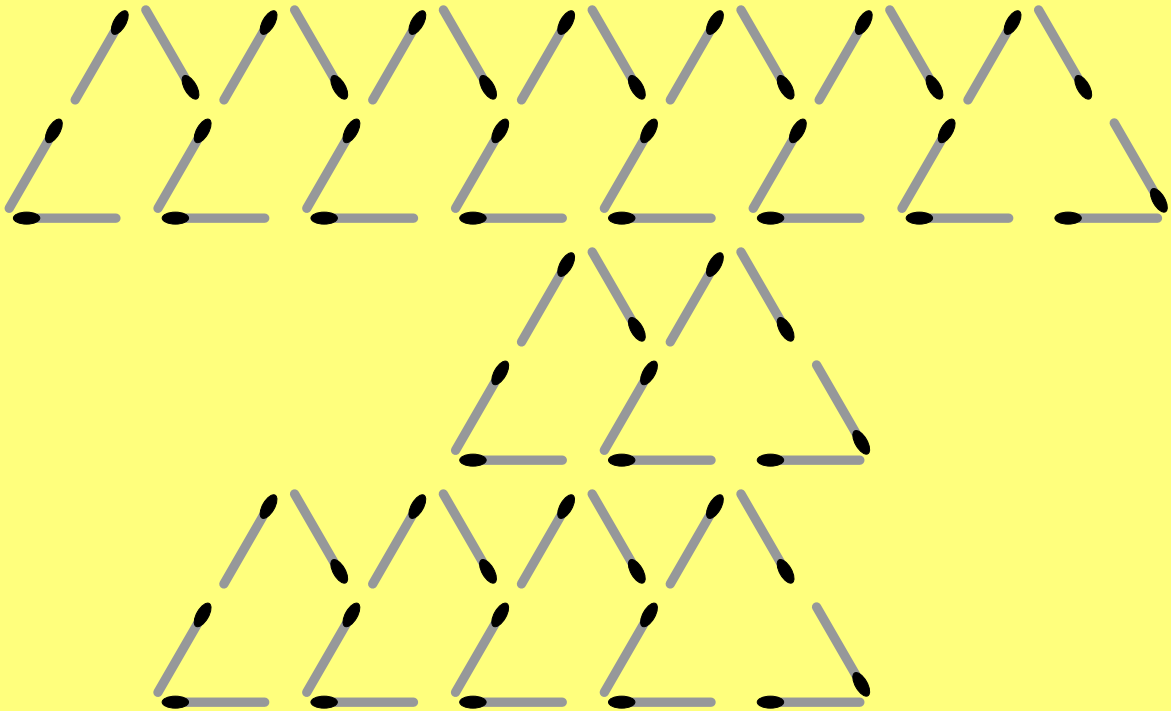
You Need

- About 30 sticks the same length (<10cm)
- Triangle dot paper

Picture Puzzles

Picture Puzzles

These are examples of mountain peaks.



Picture Puzzles

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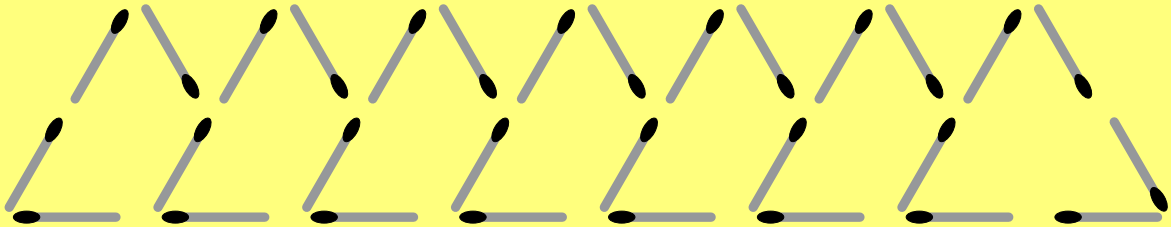
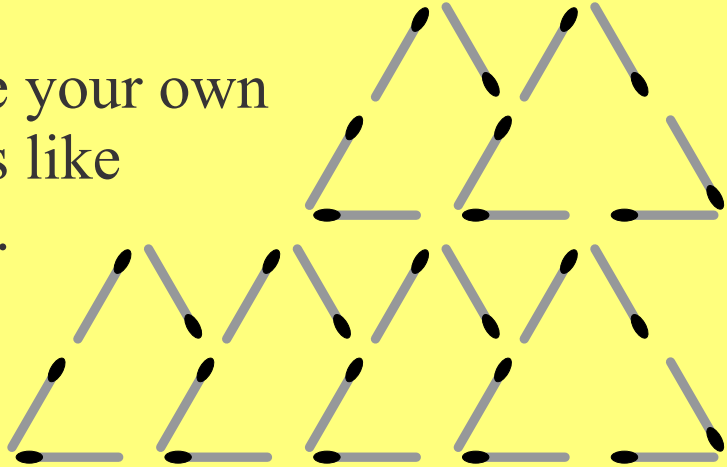
These are examples of mountain peaks.



Make your own peaks like these.



Draw them.

Record the numbers of peaks and matches.

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If I tell you any number of peaks (P)
can you tell me how to calculate
the number of matches (M) to make it?

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Explain in your journal and calculate the number of matches for 100 peaks.

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Picture
Puzzles

more

Picture
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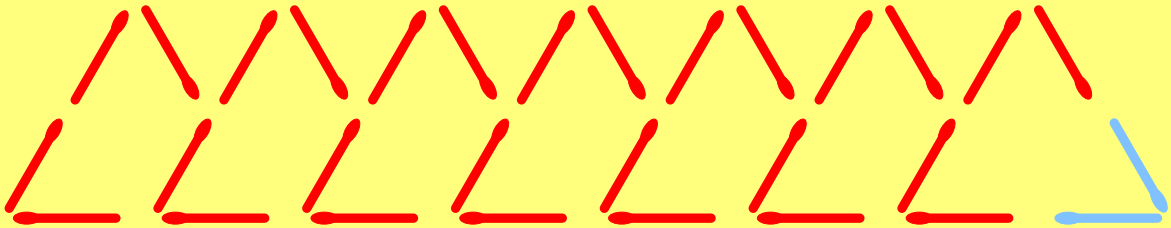
Ben sees it like this



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Explain Ben's way and use it to calculate the number of matches (M) for 39 mountain peaks (P).

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Investigate using Ben's way to calculate the number of peaks he can make if he only has 54 matches?

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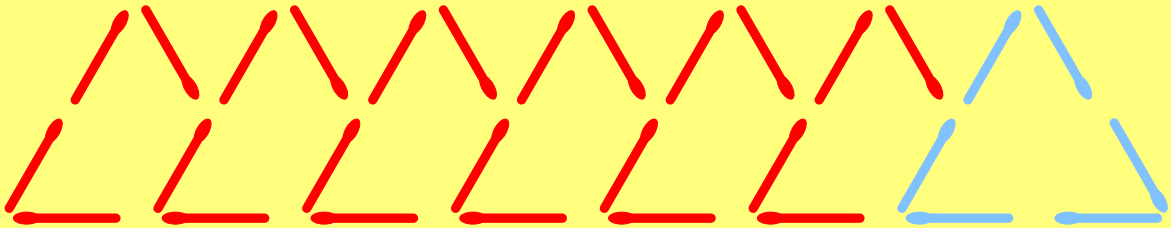
Dani sees it like this



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Explain Dani's way and use it to calculate the number of matches (M) for 44 mountain peaks (P).

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Investigate using Dani's way to calculate the number of peaks she can make if she only has 102 matches.

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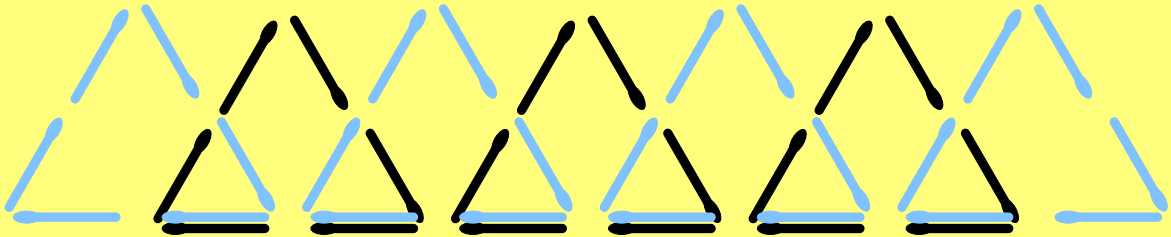
Adrian sees it like this



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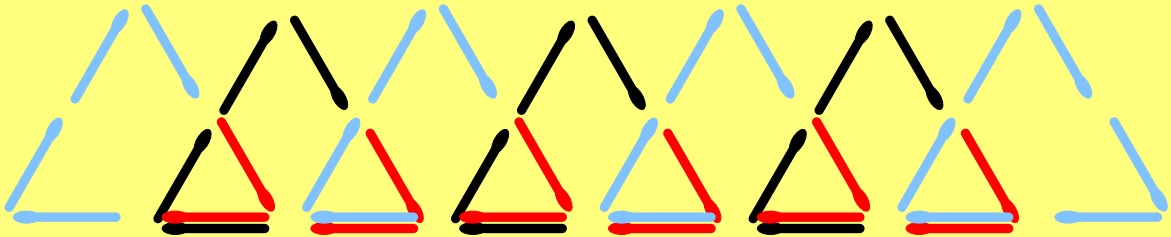
Now I can make the unseen triangles.



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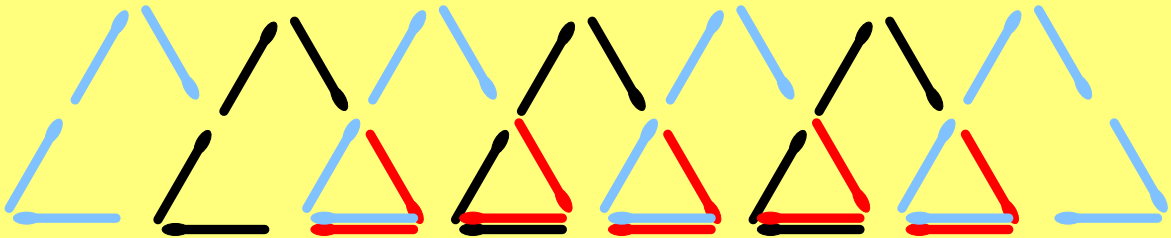

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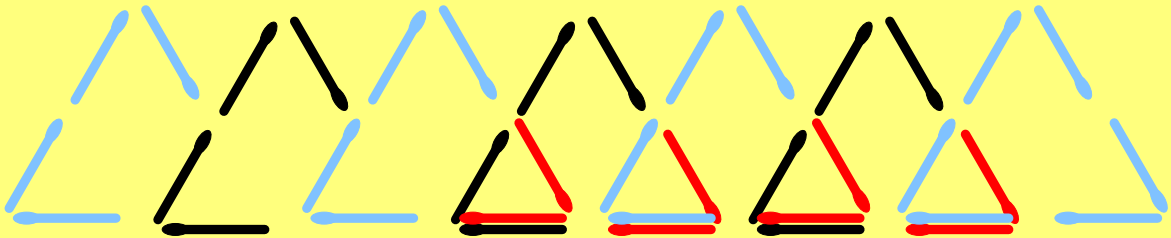

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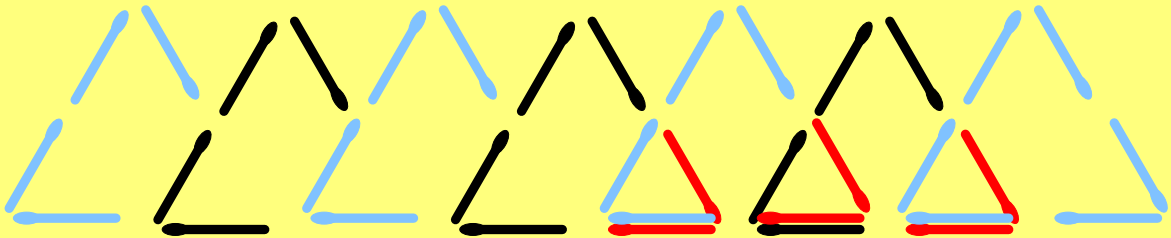

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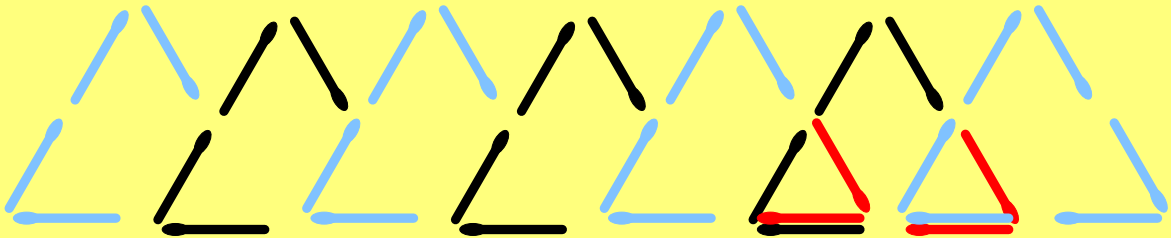

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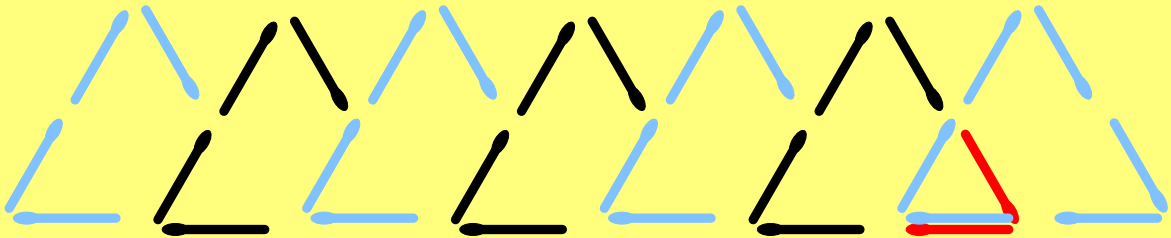

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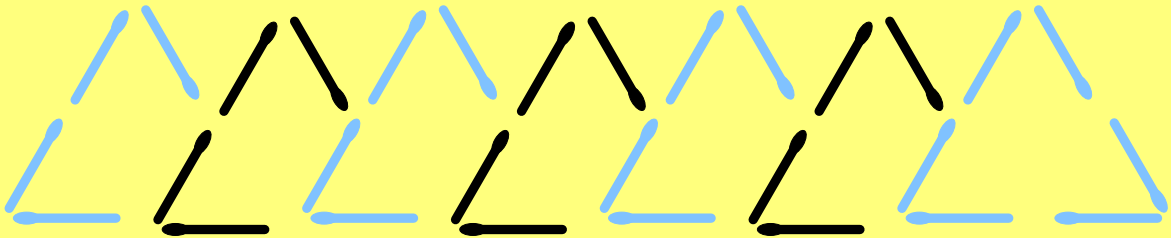
Aha!



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Explain Adrian's way and use it to calculate the number of matches for 82 peaks.

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Investigate using Adrian's way to calculate the number of triangles he can make if he only has 38 matches.

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THE END...

...OR IS IT?

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