

Make those bracelets.

4 beads

Possibility 1.  - all the same colour.

Possibility 2.  - 3 of one colour and 1 of the other colour.

Possibility 3.  - the 2 different colours can be opposite from each other.

Possibility 4.  - the same colours can be next to each other.

5 beads

Possibility 1.  - all the same colour.


Possibility 2.  - 4 of one colour and one of the other colour.

Possibility 3.  - 2 of the same colour next to each other and the other 3 colours around them.

Possibility 4.  - 1 of the pink colours in between two green and 2 more pink in between that.

6 beads

Possibility 1.  - all the same colour.

Possibility 2.  - 5 green and 1 pink.

Possibility 3.  - 2 pink next to each other and 4 green around them.


Possibility 4.  - 1 green in between 2 pinks and 3 more greens around them.


Possibility 5.  - 2 greens in between 2 pinks and 2 more pinks around them.

Possibility 6.  - pink and green alternately.

Possibility 7.  - 3 pinks next to each other and 3 greens next to each other.

7 beads

Possibility 1.  - all the same colour.


Possibility 2.  - 6 green and 1 pink.


Possibility 3.  - 2 pink next to each other and 5 green surrounding them.


Possibility 4.  - 1 green in between 2 pinks and 4 more green around them.

Possibility 5.  - 2 greens in between 2 pinks and 3 green surrounding them.

Possibility 6.  - 3 pink next to each other and 4 green around them.

Possibility 7.  - 2 green next to each other and 1 pink on either side, than ~~one~~ 1 green on either side, than another pink in the middle.

Possibility 8.  - 1 green in between 3 pinks and 3 ^{more} greens around them.

Possibility 9.  - 2 greens inbetween 3 pinks and 2 more pinks around them.


8 beads

Possibility 1.  - all green.


Possibility 2.  - 7 green and 1 pink.

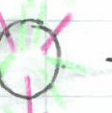
Possibility 3.  - 2 pink next to each other and 6 green around them.

Possibility 4.  - 1 green with 1 pink on either side and 5 more green around them.


Possibility 5.  - 2 greens next to each other and 1 pink on either side, 4 more greens around them.

Possibility 6.  - 3 greens next to each other and 1 pink on either side, 3 more green around them.


Possibility 7.  - 3 pinks next to each other and 5 greens around them.

Possibility 8.  - 2 greens next to each other and 1 pink on either side, then one green on either side, then 1 pink on one side and one green on the other side.

Possibility 9.  - 1 green and 1 pink on either side, 1 green on one side and 1 pink on the other side. 3 more green around them.

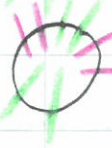
* Possibility 12.  - 2 greens next to each other and 1 pink on either side. Then 1 green on one side and 1 pink on the other side, 2 more green around them.

Possibility 13.  - 4 pinks next each other and 4 green around them.

Possibility 14.  - 3 pinks next each other. 1 green on either side. 1 pink on one side and 1 green on the other side. 1 more green around them.


Possibility 15.  - 3 pinks next to each other and 2 greens on either side. 1 more pink around them.

Possibility 16.  - 1 green with 2 pinks on either side. 3 more green around them.

Possibility 17.  - 2 greens next to each other with 2 pinks on either side. 2 more pinks around them.

9 beads

Possibility 1.  - all green


Possibility 2.  - 1 pink and the rest green.


Possibility 3.  - 2 pink next to each other and 7 green around them.


Possibility 4.  - 1 green in-between 2 pinks with 6 greens around them.


Possibility 5.  - 2 green in-between 2 pinks with 5 greens around them.


Possibility 6.  - 3 greens inbetween 2 pinks with 4 greens around them.


Possibility 7.  - 3 pinks next to each other and 6 greens around them.


Possibility 8.  - 5 greens next to each other with 1 pink on either side and then 1 green on one side and 1 pink on the other side.


Possibility 9.  - 4 greens next to each other and 1 pink on each side, 2 more green on one side and 1 more pink on the other side.


Possibility 10.  - 3 greens with 1 pink on either side and 1 pink on one side and 1 green on the other side. Then 1 more green on either side.


Possibility 11.  - 4 greens next to each other with 1 pink on either side and 1 green on either side and 1 pink on one side.





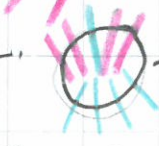



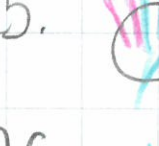

Possibility 12.  - 3 green next to each other with 1 pink on either side and 1 green on either side and 1 green on one side and 1 pink on the other side.

Possibility 13.  - 3 green next to each other with 1 pink on both sides and 1 green on both sides, then 1 green on one side and 1 pink on the other side.

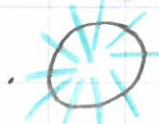



Possibility 14.  - 2 greens with one pink on both sides, then 2 more greens on both sides, then 1 more pink on 1 side.


Possibility 15.  - 4 pinks next to each other and 5 greens around them.

Possibility 16.  - 4 greens with a pink on both sides, then 2 pinks on one side and 1 green on the other side.


- Possibility 17.  - 3 pinks next to 3 greens and a green and a pink on one side and 1 green on the other side.
- Possibility 18.  - 3 greens with 1 green and 1 pink on both sides, then 1 pink on both sides.
- Possibility 19.  - 2 pinks with 2 greens on either side, 1 more pink on both sides and one green in between the 2 pinks.
- Possibility 20.  - 2 greens with 2 pinks on both sides and 2 greens on one side and 1 green on the other side.
- Possibility 21.  - 4 greens with 2 pinks on both sides and 1 green in between them.
- Possibility 22.  - 3 greens with 2 pinks and 1 green on both sides.
- Possibility 23.  - 3 greens with 1 pink on either side and 1 pink and 1 green on both sides.
- Possibility 24.  - 2 greens with 2 pinks and 1 green on one side and 1 pink and 2 greens on the other side.
- Possibility 25.  - 2 greens with 2 pinks and a green on one side and a pink, 2 greens and another pink on the other side.
- Possibility 26.  - 3 greens with 3 pinks on one side and 1 pink and 2 greens on the other side.

10 beads


- Possibility 1.  - all green.
- Possibility 2.  - 9 green and 1 pink.
- Possibility 3.  - 2 pink next to each other and 8 green around them.
- Possibility 4.  - 1 green in between 2 pinks with 7 green surrounding,


Possibility 5.  - 2 greens with 1 pink on both sides, 6 green around them.


Possibility 6.  - 3 green in-between 2 pinks with 5 green around them.


Possibility 7.  - 4 greens with 1 pink on both sides, 4 greens around them.


Possibility 8.  - 3 pinks surrounded by 7 greens.

Possibility 9.  - 1 green with 2 pinks on one side, and 1 pink on the other side, 6 green surround them.


Possibility 10.  - 5 greens with a green and a pink on one side and 2 pinks and 1 green on the other side.


Possibility 11.  - 4 greens with 2 greens and a pink on one side and 2 pinks and 1 green on the other side.


Possibility 12.  - 5 greens with 2 pinks and a green on one side with 1 green and 1 pink on the other side.


Possibility 13.  - 4 greens with 2 greens and a pink on one side and 2 pinks and a green on the other side.


Possibility 14.  - 3 greens with 2 greens and 2 pinks on one side and 2 greens and a pink on the other side.


Possibility 15.  - 2 greens with 3 greens and a pink on one side and 2 pinks and 2 greens on the other side.


Possibility 16.  - 1 pink with 3 greens and a pink on 1 side and 4 greens and a pink on the other side.


Possibility 17.  - 1 green with 2 pinks and 3 greens on one side, and 1 pink and 3 greens on the other side.


Possibility 18.  - 4 greens with 1 pink and 2 greens on one side and 2 pinks and 1 green on the other side.


Possibility 19.  - 4 pinks next to 6 greens.


Possibility 20.  - 5 greens with 2 pinks and 1 green on one side with 3 pink on the other side.


Possibility 21.  - 4 greens with 1 pink and 2 green on one side and 3 pink on the other side.


Possibility 22.  - 1 pink with 3 greens and 2 pinks on one side with 3 greens and 1 pink on the other side.


Possibility 23.  - 4 greens with 2 pinks and 1 green on one side and 2 pinks and 1 green on the other side.


Possibility 24.  - 3 greens with 2 pinks and 2 greens on one side and 2 pinks and a green on the other side.


Possibility 25.  - 2 greens with 2 pinks on one side and 2 pinks and 2 greens on the other side.


Possibility 26.  - 3 greens with 2 pinks and 2 greens on one side and 2 pinks and 1 green on the other side.


Possibility 27.  - 3 pinks with 3 greens and a pink on 1 side and 3 greens on the other side.


Possibility 28.  - 4 greens with 2 pinks and a green on both sides.


Possibility 29.  - 3 greens with 2 pinks and 2 greens on one side and 2 pink and 1 green on the other side.

Possibility 30.  - 2 greens with 2 greens and 2 pinks on both sides.


Possibility 31.  - 3 greens with 2 greens and 2 pinks on one side and 2 pinks and a green on the other side.

Possibility 32.  - 3 greens with 2 pinks and 1 green on both sides. 1 green on one of the sides.


Possibility 33.  - 5 greens and 5 pinks.


Possibility 34.  - 4 greens with 4 pinks on one side and 1 pink & 1 green on the other side.

Possibility 36.  - 4 greens with 2 pinks and a green on one side and the same on the other side.

Possibility 37.  - 3 green with 2 pinks and 2 greens on one side and 2 pinks and 1 green on the other side.

Possibility 35.  - 4 pinks with 2 greens and a pink on one side and 3 green on the other side.

* Possibility 10:  - 3 green with 2 pink and a green on one side
and 1 pink and 1 green on the other side.

Possibility 11:  - 1 green with 1 pink and 2 greens on both sides
and 1 extra pink on 1 of the sides.

New person guidance

1. How many beads? 4 to 10 beads.
2. How many of each colour? colours = A or B.
3. Work out possible arrangements.

1st possible arrangement - all A or all B.

2nd possible arrangement - 1 A and the rest B or 1 B and the rest A.

3rd possible arrangement - 2 of A and the rest B. The number of arrangements depends on the total number of beads.

Then you keep on going until the next arrangement ^{you do} is the same as one of your previous arrangements.

I really enjoyed this maths problem, it took logic but I loved working it out even when it was hard.

Zoe Morecraft

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