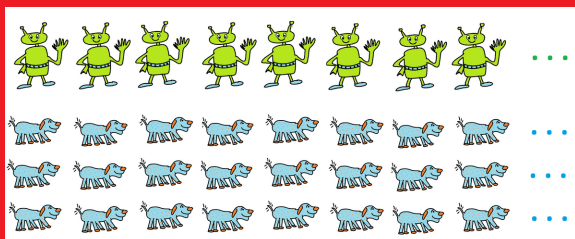


Infinity: SOLUTIONS

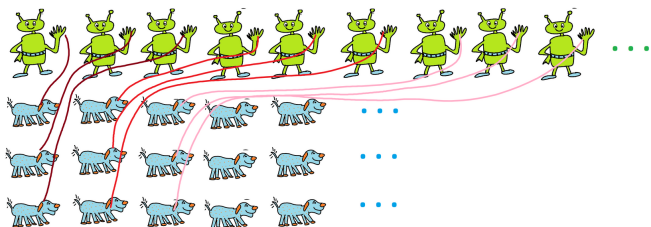
puzzle #1

Can you show that a "triple infinity" is just as infinite as a single infinity?



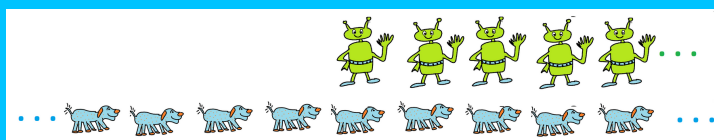
ANSWER TO PUZZLE 1:

Work in sets of three Martians and follow this leashing pattern.



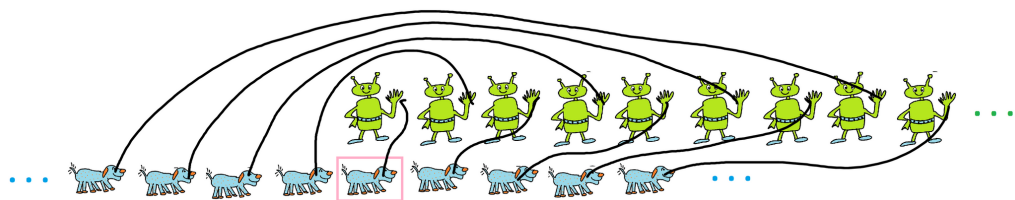
puzzle #2

This picture shows a line of Martians going off infinitely far to the right and a line of space dogs going infinitely far both to the right and to the left! Is it possible to leash each Martian to a dog and each dog to a Martian? Or is this "double infinity" of dogs a new type of infinity?



ANSWER TO PUZZLE 2:

Pick a dog, and work with a pattern of leashes that bounces left and right of that dog.



About the Author: Dr. James Tanton

The NMF Weekly is written by mathematician Dr. James Tanton as a resource for friends and fans of the 2021 National Math Festival.

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CHALLENGE: Is there any collection of dogs that is genuinely "more infinite" than a single line of Martians that goes on forever to the right?