

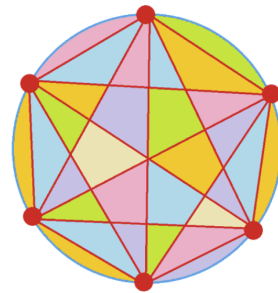
WHAT COMES NEXT: Solutions

puzzle #1

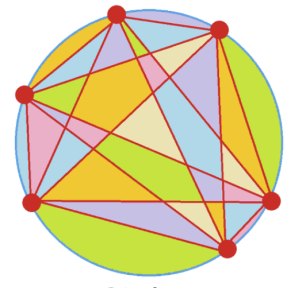
The picture on this page has six dots evenly spaced on the circle and we see the lines connecting the dots divide the circle into 30 pieces.

But what if we did NOT make arrange the dots symmetrically? Try arranging six dots on a circle in a different way and connecting all the pairs of dots. Can you get more than 30 pieces? (I bet you can!)

How many pieces can you get?



30 pieces



31 pieces

puzzle #2

What's my prediction for the next number in Maggie's sequence?

ANSWER TO PUZZLE 1:

You can get 31 pieces, but no more!

ANSWER TO PUZZLE 2:

I predict that the next number is

$$1 + 7 + 21 + 35 + 35 - 17 \times 21 + 55 \times 7 = 127.$$

What do I predict for the next one?

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

Learn more at globalmathproject.org/nmfweekly & nationalmathfestival.org

