

Two dots, best of friends

Turned out to be family  
and that's how it ends.

There once were two dots — numbers, really. One was ODD, but very special. The other was EVEN, but also very special. At least that is what everyone told them! They were the best of friends, inseparable. But they were just dots — numbers, really — and they thought they were part of something bigger!

The really crazy thing about this special ODD and special EVEN number is that they are related! Like family! They are part of a larger family! How so?

#### First, the ODD dot:

The ODD dot says, "I am only a point, a simple number. People know I exist as a number — even as a special PRIME number — but that's it. It seems I am almost invisible!"

Well, let's fix that! Get out your pens, pencils, crayons, brushes, or whatever you like to make some drawings and paintings.

A line is nothing more than a series of dots, so just make a pretty straight line of your dots. That line is now a side of a SQUARE, so draw in the other sides with lines that make up a SQUARE. Any size you like is just fine, for now.

Wow, the little ODD dot is now an AREA!!!

WELCOME TO THE VISIBLE WORLD. EVERYONE CAN SEE YOU NOW.

Let's give you a name, how about MPS (decoded as Mersenne Prime Square).

And guess what MPS? You are actually the grandparent(s) in this big family! Think of yourself as the TOP LAYER!

#### Second, the EVEN dot:

The EVEN dot also says, "I am only a point, a simple number. People know I exist as a number — even as a special EVEN Perfect Number — but that's it. It seems I am almost invisible!"

Well, let's fix that, but along the way you will see that you have another brother/sister that is actually an ODD number. That's OK because we equally like both ODD and EVEN numbers!

In fact, you the EVEN dot and your ODD complement dot will, like the children of your grandparents, together form 2 AREAS that exactly match your grandparents MPS Layer!

And what should we call you two? How about PN and OC (decoded as PN=Perfect Number and OC=ODD Complement)?

While we are here looking at the MIDDLE Layer of PN + OC, just what is so special about being an EVEN Perfect Number? A PN is a number whose "factors" add up to equal the number itself. (Just don't include the number itself as one of the factors.) For example: the PN 6 = 1 + 2 + 3. The next PN = 28 = 1 + 2 + 4 + 7 + 14.

So, if we look below the TOP MPS Layer, we see our 2nd, MIDDLE Layer of the PN + OC.

#### And now, for the 3rd, BOTTOM Layer:

You might have guessed it! Yes, the children of the MIDDLE Layer have given rise — NOW AS PARENTS — to their own children of the BOTTOM Layer.

Making a SQUARE out of the short sides of the PN and OC RECTANGULAR AREAS above, we know have 2 new little SQUARES + 2 new smaller, left-over RECTANGLES that exactly fill out the same AREA as their parents and their grandparents!

Their names are the Perfect Number Square (PNS), ODD Complement Square (OCS) and the two identical Complement Rectangles (CR).

You might ask, "Does this BOTTOM Layer of PNS+OCS+CR+CR give rise to yet another layer? Yes, and on and on! What a family tree!

And in this great and wonderful family tree we have an assortment of ODD and EVEN AREAS that all came from ODD and EVEN little dots!

Every dot counts!

The ODD dot is prime

Let's make its number a line

And a square so fine

The EVEN dot knows  
It is a Perfect Number  
RECTANGLE BELOW

Seems the square above,  
A parent, has 2 children,  
Rectangles of love

Children as pair-ents,

Give, in the layer below,

Rectangles, square mints