Niharika Paul — Fitted! — Age 9

I know that the length of each side must be ≥ 18 as that is the biggest side of square.

I also know that the area = 1+16+49+64+81+100+196+225+324 = 1056. Which means l×b = 1056, where l, b are sides of the rectangle.

∴ I prime factorise 1056.

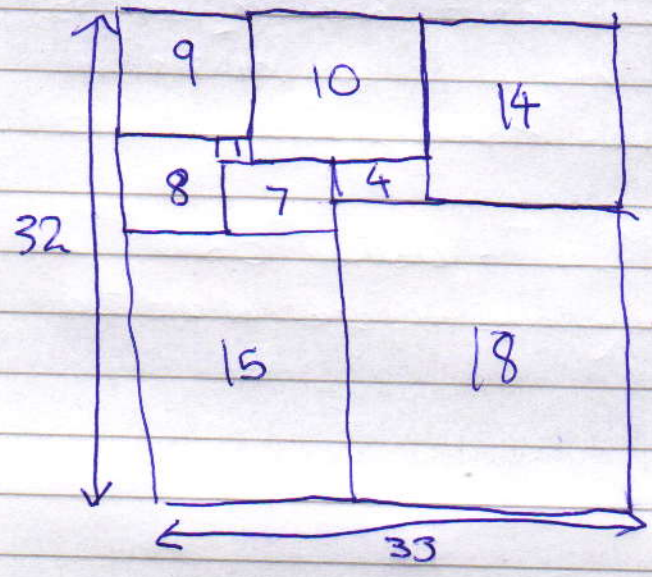
Which is = $2^5 \times 11 \times 3$.

So, I make a number that is a factor of 1056 to be the length of on side. Then I calculate the length of the other. Then, I find how one of the lengths can be made with the side of square that I have and try it out.

Now, I know that the lengths of the 2 sides have to be fairly close - this is my tummy feeling.

∴ I choose the combination of 32 × 33.

When I try this out I find that it works. This is the rectangle I get:



I approximate each of the shapes to be squares. The number inside is the length of the side of the square.

The 1st and 2nd approaches are heuristic ones. While the 3rd person starts her solution the same way as I did — by finding the area.