***The Number Devil* – Reading Notes Ch. 10**

Take notes as you read chapter 10.

**1.The snowflake opening of this chapter brings us to “Bonacci Numbers” again… what happens when you divide them by their neighbors? Use the words shared in the chapter, as well as your own words, to describe the results.**
\*What does he mean when he says the numbers “seem to be swaying?”

**2. Show your understanding of this new “wobbly” pattern using everyday, garden variety numbers (different than those on page 197).**

**3. What is going on with the pentagon and stars? Can you explain the steps that lead to the drawing on page 200? What is so special about 1.618??**

**4. The Number Devil presents yet ANOTHER big idea around mathematical reasoning and geometry. What can you prove using the dots-spaces-lines equation on page 203?**
\*Take a shot at it like Robert does, draw any old figure… and then explain how you can prove your theory.

**5. The Number Devil and Robert use nets to demonstrate the big ideas, sketch a few of the nets shared on page 205-06 OR draw your own to show the proof of dots, spaces and lines.**

**6. Those of you who are handy with scissors and paste may want to try making the figures the Number Devil showed to Robert. You’ll need to draw in little tabs to help you with the pasting. If you do all five and are still game, you can move on to a particularly sophisticated figure – but only if you are very patient and precise. Take a large sheet of paper (it should be at least 35 X 20 cm, that is 9 X 12 – and thick, though cardboard will not work) and copy the figure you see on the next page. Keep in mind that each side of the many triangles must be exactly as long as al the others. You can decide how long you want the sides to be, though three to four centimeters – that is, about an inch and a half (or one quang) – is ideal. Cut the figure and, using a ruler, fold the paper forward along the red lines and backward along the blue lines. Then past it together, first the B tab going with the b triangle, the C tab with the c triangle, etc. and finally the A tab with the a triangle. WHAT DO YOU GET? A crazy ring made of ten little pyramids. You can turn it forward or back (if you’re careful!), and each time you do, a new pentagon and a five-pointed star will come into view. Guess what you get if you count up the dots, spaces, and lines and enter them into our equation:**

**D + S – L = ?**