1. Explain to your group one of the families of numbers from Chapter 1 that you found interesting. Summarize your discussions below:

2. In the text, a fact used in passing is that every number is either divisible by two (even) or odd. Even numbers can always be written in the form $2d$ for some other number d, while odd numbers can always be written in the form $2d + 1$.

Can you generalize this classification with "two" replaced by "three"? (hint: there will be the numbers divisible by 3, and then *two* other kinds of "odd for three" numbers)

What about four? five?

3.(a)The sum of two even numbers is even, and in general the sum of two numbers divisible by d is again divisible by d. Verify this fact.

3.(b) What happens if you add a number divisible by d to a number which is *not* divisible by d? Write some examples with small values of d. Do you see a pattern?

3.(c) Make a conjecture from 3.(b), and then attempt to verify it mathematically.

4. The textbook breaks up Pythagorean triples by looking at the divisibility of a, b, c with respect to 2. Start to make such an analysis using 3 instead of 2. Does it seem more or less difficult? Why?