Age 14+ Level ★
Worksheet 1

1. **Flora the Florist**
   Flora the florist has 24 white, 42 red and 36 yellow roses. What is the greatest number of identical bunches she can make that uses all of the flowers?

2. **Essential Supplies**
   'Saturn' chocolate bars are packed in boxes of either 5 or 12.
   What is the smallest number of full boxes required to pack exactly 2005 'Saturn' bars?

3. **Punky Fish**
   A male punky fish has 9 stripes and a female punky fish has 8 stripes. I count 86 stripes on the fish in my tank.

   What is the ratio of male fish to female fish?

4. **Threes and Fours**
   An integer contains only the digits 3 and 4, with at least one of each.
   The integer is divisible by both 3 and 4.
   What is the smallest such integer?

5. **Peter's Primes**
   Peter wrote a list of all the numbers that can be formed by changing one digit of the number 200.
   How many of Peter's numbers are prime?

6. **End of a Prime**
   I made a list of every number that is the units digit of at least one prime number. How many digits appear in the list?

These problems are adapted from UKMT (ukmt.org.uk) and WMC (competition.ac) problems.