FSAP
Primes

1. Factor each number into its prime factors.

   (a) 60

   (b) 144

   (c) 75

   (d) 180

   (e) 72

   (f) 70

2. Evaluate the following expressions

   (a) $2\left(\frac{6-3}{4-2}\right)-3\left(\frac{5-2}{3}\right)$

   (b) $\frac{2}{5-2}+\frac{2}{3+2}$

3. Look at your answers to question 1. What is the largest factor that is common to 60 and 144? This is called the greatest common divisor.

4. Look at your answers to question 1. What is the smallest number that is a multiple of both 60 and 70? This is called the least common multiple.

5. Find the 20 smallest prime numbers.

6. How would you explain the process by which you found the 20 smallest primes? Can you write out steps for someone to follow?

7. Can you factor 1000 into two numbers neither of which is divisble by 10?

8. A number is square if it is equal to another number squared. For examples 9 is a square number since $9 = 3^2$. Is it true that even square numbers must be divisble by 4? Can you explain why?