1. Here is a prime factor tree.
(i) Circle the leaves (prime factors)

(ii) Write 16 as a product of its prime factors
2. Jarvis uses an "easy first" strategy to draw his prime factor trees.

Kai uses a "smallest prime first" strategy to draw his prime factor trees.
Both boys have drawn incomplete prime factor trees.


500
Jarvis's prime factor tree


Kali's prime factor tree

Complete either Jarvis's or Kail's prime factor tree.
3. (a) Complete this prime factor tree.

(b) Complete this prime factor tree.


26
4. (i) Complete this prime factor tree.

(ii) Write 162 as a product of its prime factors.
5. Students ONLY need to be able divide by 2 or 10 without a calculator

Write 700 as a product of its prime factors
6. Students ALSO need to be able divide by 9 (up to 81) without a calculator AND know $9=3 \times 3$ without a calculator

Write 216 as a product of its prime factors
7. Students ALSO need to be able to divide by 3 and 5 without a calculator

Write 330 as a product of its prime factors
8. (a) Write 75 as a product of its prime factors.
(b) Find the Highest Common Factor (HCF) of 60 and 75
9. Given that $E=2^{3} \times 3^{5} \times 5$ and $F=2^{4} \times 3 \times 5^{2}$ write down, as a product of powers of its prime factors,
(i) the highest common factor (HCF) of $E$ and $F$
(ii) the lowest common multiple (LCM) of $E$ and $F$.
13. Students ALSO need to be able to divide by other primes e.g. 7 and 11 and 13 etc.

AND students need to reason about which primes to try to divide by.
Write 195 as a product of its prime factors

