

M4 = 28 days to go!

3 (a) Given that $4500 = 2^a \times 3^2 \times 5^b$

work out the values of a and b .

Answer $a =$ _____ $b =$ _____ [3]

(b) Hence, write down the lowest value by which 4500 needs to be multiplied to make a **cube** number.

Answer _____ [2]

13 Simplify fully

$$\frac{3x^2 - 6xy}{4x^2 - 8xy - 3xy + 6y^2}$$

Answer _____ [2]

19 A is a fraction whose denominator is 3 more than its numerator.

A new fraction B is produced.

4 is added to the numerator of A to give the numerator of B.

4 is added to the denominator of A to give the denominator of B.

Fraction B is now larger than fraction A by $\frac{1}{8}$

By setting up and solving a suitable equation find the original fraction A.

A method of trial and improvement will not be accepted.

Answer _____ [8]