GCSE HIGHER · REVISION MAT 1

Factors, multiples and primes

1 Write 60 as a product of prime factors.

2 Find the highest common factor of 24 and 36.

3 Explain why 91 is not a prime number.

4 One bus leaves every 12 minutes and another every 18 minutes.

Both leave at 9:00 am.

When do they next leave together?

5 $A = 2^3 \times 3 \times 5^2$ and $B = 2 \times 3^2 \times 5$

Find the HCF and the LCM of A and B.

6 A floor is 360 cm by 480 cm.

It is covered exactly with the largest possible identical square tiles.

How many tiles are needed?

7 Show that this is a square number.

$$2^4 \times 3^2$$

Find its square root.

8 A number n has HCF 12 with 72.

The LCM of n and 72 is 360.

Find n.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Factors, multiples and primes

1 $2^2 \times 3 \times 5$

2 12

3 $91 = 7 \times 13$, so it has factors other than 1 and itself.

4 LCM(12, 18) = 36

9:36 am

5 HCF = $2 \times 3 \times 5$

LCM = $2^3 \times 3^2 \times 5^2$

HCF 30, LCM 1800

6 HCF(360, 480) = 120 cm

3×4

12 tiles

7 $= (2^2 \times 3)^2$

Square root = 12

8 HCF × LCM = product

$12 \times 360 = 72n$

$n = 60$

Mr&Mrs MATHS