Number – HCF and LCM

HCF
Highest common factor

The highest number that divides exactly into 18 and 24 is 6

The HCF of 18 and 24 is 6

LCM
Lowest common multiple

The lowest number that is a multiple of 8 and 30 is 120

The LCF of 8 and 30 is 120

HCF and LCM for large numbers

Find the HCF and LCM of 270 and 252

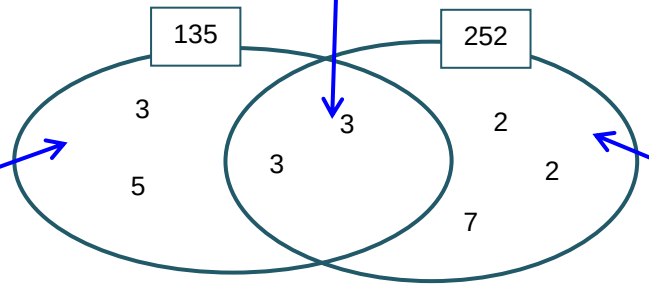
Write 270 as a product of prime factors

135 = <u>3 x 3</u> x 3 x 5

Write 252 as a product of prime factors

252 = 2 x 2 x <u>3 x 3</u> x 7

3 x 3 is in both lists so write them in the overlap



3 x 5
are the factors left over for 135

2 x 2 x 7
are the factors left over for 252

HCF = 3 x 3 = 9
Multiply the numbers in the overlap

LCM = 3 x 5 x 3 x 3 x 2 x 2 x 7 = 3780
Multiply the numbers in the whole diagram