#### What is the prime factorization of 12?



#### Which shows the prime factorization of 30?



**Express 48 as a product of prime factors.** 



What is the prime factorization of 100?



Write 60 as a product of its prime factors.



#### Two numbers have prime factors 2<sup>2</sup> \* 3 \* 5 and 2 \* 3<sup>2</sup>. What is their HCF?



# Numbers A = 2<sup>3</sup> \* 3<sup>2</sup> and B = 2<sup>2</sup> \* 3<sup>3</sup> \* 5. What is their LCM?



HCF of two numbers is  $12(2^2 * 3)$ , LCM is 72 (2^3 \* 3^2). One number is 24 (2^3 \* 3). What is the prime factorization of the other?



A number has prime factors 2<sup>2</sup> \* 3 \* 5<sup>2</sup>. What smallest whole number must it be multiplied by to become a perfect square?



#### Numbers: P = 2<sup>3</sup> \* 3<sup>2</sup> \* 5, Q = 2<sup>2</sup> \* 3<sup>4</sup>, R = 2<sup>4</sup> \* 3 \* 7. What is their LCM?



#### A number 2^a \* 3^b \* 5^c equals 1800. What is a + b + c?



# How many positive divisors does 72 (2<sup>3</sup> \* 3<sup>2</sup>) have?



# What is the sum of all positive divisors of $2^4 * 3^2 * 5?$



#### A number N = 2^3 \* 3^a \* 5^2 must have 90 (2 \* 3^2 \* 5) as a divisor. What is the smallest possible a?



Two numbers have HCF = 30 (2 \* 3 \* 5) and LCM = 1800 (2<sup>3</sup> \* 3<sup>2</sup> \* 5<sup>2</sup>). If their prime factors are 2<sup>a</sup> \* 3<sup>b</sup> \* 5<sup>c</sup> and 2<sup>d</sup> \* 3<sup>e</sup> \* 5<sup>f</sup>, what is a + d?

