Answer on Question #42724 – Math - Other

Find the lcm & hcf of 8,9,and 25 by the prime factorization method.

Solution.

First, we factor the numbers to their primes. $8 = 2^3, 9 = 3^2, 25 = 5^2$. Next, we identify any shared primes. With 8, 9 and 25, there are no shared primes, since these numbers are coprime. Then, we take the shared prime (as we don't have such, we take 1) and multiply it with all of the other prime factors. In our case, we multiply 1 with $2^3, 3^2, 5^2$. Finally, $lcm(8,9,25) = 1800$.

To find the hcf of the numbers given, we have to multiply the common prime factors. But we don't have such (the numbers are coprime), that is why $hcf(8,9,25) = 1$.

Answer: 1800, 1.