## Real Numbers Ex 1.3 Q1

**Answer :**

TO EXPRESS: each of the following numbers as a product of their prime factors

(i) 420

$420 = 2^2 \times 3 \times 5 \times 7$

(ii) 468

$468 = 2^2 \times 3^2 \times 13$

(iii) 945

$945 = 3^3 \times 5 \times 7$

(iv) 7325

$7325 = 5^2 \times 293$

## Real Numbers Ex 1.3 Q2

**Answer :**

TO EXPRESS: each of the following numbers as a product of their prime factors

(i) 20570

$20570 = 2 \times 5 \times 112 \times 17$

(ii) 58500

$58500 = 2^2 \times 3^2 \times 5^3 \times 13$

(iii) 45470971

$45470971 = 7^2 \times 13^2 \times 17^2 \times 19$

## Real Numbers Ex 1.3 Q3

**Answer :**

EXPLAIN: Why $7 \times 11 \times 13 + 13$ and $7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 + 5$ are composite numbers

We can see that both the numbers have common factor 7 and 1.

$$7 \times 11 \times 13 + 13 = (77 + 1) \times 13$$
$$= 78 \times 13$$
$$7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 + 5 = (7 \times 6 \times 4 \times 3 \times 2 + 1) \times 5$$
$$= 1008 \times 5$$

And we know that composite numbers are those numbers which have at least one more factor other than 1.

Hence after simplification we see that both numbers are even and therefore the given two numbers are composite numbers

## Real Numbers Ex 1.3 Q4

**Answer :**

TO CHECK: Whether $6^n$ can end with the digit 0 for any natural number n.

We know that

$6^n = (2 \times 3)^n$

$6^n = 2^n \times 3^n$

Therefore, prime factorization of $6^n$ does not contain 5 and 2 as a factor together.

Hence $6^n$ can never end with the digit 0 for any natural number $n$

********** END **********