# RD SHARMA

# Solutions

# Class 6 Maths

# Chapter 2

# Ex 2.6

**1.) Find the H.C. F of the following numbers using prime factors using prime factorization method:**

**Answer:**

**(i) 144 and 198**

Prime factorization of 144 = 2 x 2 x 2 x 3 x 3

Prime factorization of 198 = 2 x 3 x 3 x11

Therefore, HCF = 2 x 2 x 3 = 18

**(ii) 81 and 117**

Prime factorization of 81 = 3 x 3 x 3 x 3

Prime factorization of 117 = 3 x 3 x13

Therefore, HCF = 3 x 3 = 9

**(iii) 84 and 98**

Prime factorization of 84 = 2 x 2 x 3 x 7

Prime factorization of 98 = 2 x 7 x 7

Therefore, HCF = 2 x 7 = 14

**(iv) 225 and 450**

Prime factorization of 225 = 3 x 3 x 5 x 5

Prime factorization of 198 = 2 x 3 x 3 x 5 x 5

Therefore, HCF = 3 x 3 x 5 x 5 = 225

**(v) 170 and 238**

Prime factorization of 170 = 2 x 5 x 17

Prime factorization of 238 = 2 x 7 x 17

Therefore, HCF = 2 x 17 = 34

**(vi) 504 and 980**

Prime factorization of 504 = 2 x 2 x 2 x 3 x 3 x 7

Prime factorization of 980 = 2 x 2 x 5 x 7 x 7

Therefore, HCF = 2 x 2 x 7 = 28

**(vii) 150, 140 and 210**

Prime factorization of 150 = 2 x 3 x 5 x 5

Prime factorization of 140 = 2 x 2 x 5 x 7

Prime factorization of 210 = 2 x 3 x 5 x 7

Therefore, HCF = 2 x 5 = 10

**(viii) 84, 120 and 138**

Prime factorization of 84= 2 x 2 x 3 x 7

Prime factorization of 120 = 2 x 2 x 2 x 3 x 5

Prime factorization of 138 = 2 x 3 x 23

Therefore, HCF = 2 x 3 = 6

**(ix) 106, 159 and 265**

Prime factorization of 106 = 2 x 53

Prime factorization of 159= 2 x 53

Prime factorization of 265 = 5 x 53

Therefore, HCF = 53

**2.) What is the H.C.F of two consecutive?**

**Answer:**

(i) The common factor of two consecutive numbers is always 1.

Therefore, HCF of two consecutive numbers = 1

(ii) The common factors of two consecutive even numbers are 1 and 2.

Therefore, HCF of two consecutive even numbers = 2

(iii) The common factor of two consecutive odd numbers is 1.

Therefore, HCF of two consecutive odd numbers = 1

**3.) H.C.F of co-primes numbers 4 and 15 was found as follows:**

**4 = 2 x 2 and 15 = 3 x 5**

**Since there is no common prime factor. So, H.C.F of 4 and 15 is 0. Is the answer correct? If not what is the correct H.C.F?**

**Answer:**

No, it is not correct.

We know that HCF of two co-prime number is 1.

4 and 15 are co-prime numbers because the only factor common to them is 1.

Thus, HCF of 4 and 15 is 1.