NCERT SOLUTIONS FOR CLASS 6 MATHS PLAYING WITH NUMBERS EXERCISE 3.6

Q1. Find the H.C.F. of the following numbers:

(a) 18, 48, (b) 30, 42 , (c) 18, 60, (d) 27, 63, (e) 36, 84, (f) 34, 102, (g) 70, 105, 175, (h) 91, 112, 49, (i) 18, 54, 81, (j) 12, 45, 75

Ans:

(a) Factors of 18 = 2 x 3 x 3

Factors of 48 = 2 x 2 x 2 x 2 x 3

H.C.F. (18, 48) = 2 x 3 = 6

(b) Factors of 30 = 2 x 3 x 5

Factors of 42 = 2 x 3 x 7

H.C.F. (30, 42) = 2 x 3 = 6

(c) Factors of 18 = 2 x 3 x 3

Factors of 60 = 2 x 2 x 3 x 5

H.C.F. (18, 60) = 2 x 3 = 6

(d) Factors of 27 = 3 x 3 x 3

Factors of 63 = 3 x 3 x 7

H.C.F. (27, 63) = 3 x 3 = 9

(e) Factors of 36 = 2 x 2 x 3 x 3

Factors of 84 = 2 x 2 x 3 x 7

H.C.F. (36, 84) = 2 x 2 x 3 = 12

(f) Factors of 34 = 2 x 17

Factors of 102 = 2 x 3 x 17

H.C.F. (34, 102) = 2 x 17 = 34

(g) Factors of 70 = 2 x 5 x 7

Factors of 105 = 3 x 5 x 7

Factors of 175 = 5 x 5 x 7

H.C.F. = 5 x 7 = 35

(h) Factors of 91 = 7 x 13

Factors of 112 = 2 x 2 x 2 x 2 x 7

Factors of 49 = 7 x 7

H.C.F. = 1 x 7 = 7

(i) Factors of 18 = 2 x 3 x 3

Factors of 54 = 2 x 3 x 3 x 3

Factors of 81 = 3 x 3 x 3 x 3

H.C.F. = 3 x 3 = 9

(j) Factors of 12 = 2 x 2 x 3

Factors of 45 = 3 x 3 x 5

Factors of 75 = 3 x 5 x 5

H.C.F. = 1 x 3 = 3

Q2. What is the H.C.F. of two consecutive:

(a) numbers?

(b) even numbers?

(c) odd numbers?

Ans:

(a) H.C.F. of two consecutive numbers be 1.

(b) H.C.F. of two consecutive even numbers be 2.

(c) H.C.F. of two consecutive odd numbers be 1.

Q3. H.C.F. of co-prime numbers 4 and 15 was found as follows by factorization:

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.?

Ans: No. The correct H.C.F. is 1.

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