NCERT Solutions For Class 10 Maths Real Numbers Exercise 1.2

Q1 . Express each number as product of its prime factors:

(i) 140 (ii) 156 (iii) 3825 (iv) 5005 (v) 7429

Answer :

(i) $140 = 2\times2\times5\times7 = 2^2\times5\times7$

(ii) $156 = 2\times2\times3\times13 = 2^2\times3\times13$

(iii) $3825 = 3\times3\times5\times5\times17 = 3^2\times5^2\times17$

(iv) $5005 = 5\times7\times11\times13$

(v) $7429 = 17\times19\times23$

Q2 . Find the LCM and HCF of the following pairs of integers and verify that LCM × HCF = product of the two numbers.

(i) 26 and 91 (ii) 510 and 92 (iii) 336 and 54

Answer :

(i) 26 and 91

$26 = 2\times13$

$91 = 7\times13$

$HCF = 13$

$LCM = 2\times7\times13 = 182$

Product of the two numbers $= 26\times91 = 2366$

$HCF\times LCM = 13\times182 = 2366$

Hence, product of two numbers = HCF × LCM

(ii) 510 and 92

$510 = 2\times3\times5\times17$

$92 = 2\times2\times23$

$HCF = 2$

$LCM = 2\times2\times3\times5\times17\times23 = 23460$

Product of the two numbers $= 510\times92 = 46920$

$\text{LCM} = 2\times2\times3\times5\times17\times23 = 23460$

$\text{Product of the two numbers} = 510\times92 = 46920$

$\text{HCF}\times\ \text{LCM} = 2\times23460$

$= 46920$

Hence, product of two numbers = HCF × LCM

(iii) 336 and 54

$336 = 2\times2\times2\times2\times3\times7$

$336 = 2^4\times3\times7$

$54 = 2\times3\times3\times3$

$54 = 2\times3^3$

$\text{HCF} = 2\times3 = 6$

$\text{LCM} = 2^4\times3^3\times7 = 3024$

$\text{Product of the two numbers} = 336\times54 = 18144$

$\text{HCF}\times\text{LCM} = 6\times3024 = 18144$

Hence, product of two numbers = HCF × LCM

Q3 :Find the LCM and HCF of the following integers by applying the prime factorisation method.

(i) 12, 15 and 21 (ii) 17, 23 and 29 (iii) 8, 9 and 25

Answer :

(i) 12,15 and 21

$12 = 2^2 \times 3$

$15 = 3 \times 5$

$21 = 3 \times 7$

$HCF = 3$

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

(ii) 17,23 and 29

$17 = 1 \times 17$

$23 = 1 \times 23$

$29 = 1 \times 29$

$HCF = 1$

$LCM = 17 \times 23 \times 29 = 11339$

(iii) 8,9 and 25

$8 = 2 \times 2 \times 2$

$9 = 3 \times 3$

$25 = 5 \times 5$

$HCF = 1$

$LCM = 2 \times 2 \times 2 \times 3 \times 3 \times 5 \times 5 = 1800$

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