Playing with Numbers Ex 2.9 Q1

Answer :

(i) Prime factorisation of 48 = 2 × 2 × 2 × 2 × 3

Prime factorisation of 60 = 2 × 2 × 3 × 5

∴ Required LCM = 2 × 2 × 2 × 2 × 3 × 5 = 240

(ii) Prime factorisation of 42 = 2 × 3 × 7

Prime factorisation of 63 = 3 × 3 × 7

∴ Required LCM = 2 × 3 × 3 × 7 = 126

(iii) Prime factorisation of 18 = 2 × 3 × 3

Prime factorisation of 17 = 17

∴ Required LCM = 2 × 3 × 3 × 17 = 306

(iv) Prime factorisation of 15 = 3 × 5

Prime factorisation of 30 = 2 × 3 × 5

Prime factorisation of 90 = 2 × 3 × 3 × 5

∴ Required LCM = 2 × 3 × 3 × 5 = 90

(v) Prime factorisation of 56 = 2 × 2 × 2 × 7

Prime factorisation of 65 = 5 × 13

Prime factorisation of 85 = 5 × 17

∴ Required LCM = 2 × 2 × 2 × 5 × 7 × 13 × 17 = 61,880

(vi) Prime factorisation of 180 = 2 × 2 × 3 × 3 × 5

Prime factorisation of 384 = 2 × 2 × 2 × 2 × 2 × 2 × 2 × 3

Prime factorisation of 144 = 2 × 2 × 2 × 2 × 3 × 3

∴ Required LCM = 2 × 2 × 2 × 2 × 2 × 2 × 2 × 3 × 3 × 5 = 5,760

(vii) Prime factorisation of 108 = 2 × 2 × 3 × 3 × 3

Prime factorisation of 135 = 3 × 3 × 3 × 5

Prime factorisation of 162 = 2 × 3 × 3 × 3 × 3

∴ Required LCM = 2 × 2 × 3 × 3 × 3 × 3 × 5 = 1,620

(viii) Prime factorisation of 28 = 2 × 2 × 7

Prime factorisation of 36 = 2 × 2 × 3 × 3

Prime factorisation of 45 = 3 × 3 × 5

Prime factorisation of 60 = 2 × 2 × 3 × 5

∴ Required LCM = 2 × 2 × 3 × 3 × 5 × 7 = 1,260

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