

**RD SHARMA**

**Solutions**

**Class 6 Maths**

**Chapter 2**

**Ex 2.9**

**1.) Determine the L.C.M of the numbers given below:**

**Answer:**

**(i) 48 , 60**

Prime factorization of 48 =  $2 \times 2 \times 2 \times 2 \times 3$

Prime factorization of 60 =  $2 \times 2 \times 3 \times 5$

Therefore, Required LCM =  $2 \times 2 \times 2 \times 2 \times 3 \times 5 = 240$

**(ii) 42, 63**

Prime factorization of 42 =  $2 \times 3 \times 7$

Prime factorization of 63 =  $3 \times 3 \times 7$

Therefore, Required LCM =  $2 \times 3 \times 3 \times 7 = 126$

**(iii) 18, 17**

Prime factorization of 18 =  $2 \times 3 \times 3$

Prime factorization of 17 = 17

Therefore, Required LCM =  $2 \times 3 \times 3 \times 17 = 306$

**(iv) 15, 30, 90**

Prime factorization of 15 =  $3 \times 5$

Prime factorization of 30 =  $2 \times 3 \times 5$

Prime factorization of 90 =  $2 \times 3 \times 3 \times 5$

Therefore, Required LCM =  $2 \times 3 \times 3 \times 5 = 90$

**(v) 56, 65, 85**

Prime factorization of 56 =  $2 \times 2 \times 2 \times 7$

Prime factorization of 65 =  $5 \times 13$

Prime factorization of 85 =  $5 \times 17$

Therefore, Required LCM =  $2 \times 2 \times 2 \times 5 \times 7 \times 13 \times 17 = 61,880$

**(vi) 180, 384, 144**

Prime factorization of 180 =  $2 \times 2 \times 3 \times 3 \times 5$

Prime factorization of 384 =  $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3$

Prime factorization of 144 =  $2 \times 2 \times 2 \times 2 \times 3 \times 3$

Therefore,

Therefore, Required LCM =  $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5 = 5,760$

**(vii) 108, 135, 162**

Prime factorization of 108 =  $2 \times 2 \times 3 \times 3 \times 3$

Prime factorization of 135 =  $3 \times 3 \times 3 \times 5$

Prime factorization of 162 =  $2 \times 3 \times 3 \times 3 \times 3$

Therefore, Required LCM =  $2 \times 2 \times 3 \times 3 \times 3 \times 3 \times 5 = 1,620$

**(viii) 28, 36, 45, 60**

Prime factorization of 28 =  $2 \times 2 \times 7$

Prime factorization of 36 =  $2 \times 2 \times 3 \times 3$

Prime factorization of 45 =  $3 \times 3 \times 5$

Prime factorization of 60 =  $2 \times 2 \times 3 \times 5$

Therefore, Required LCM =  $2 \times 2 \times 3 \times 3 \times 5 \times 7 = 1,260$